Islamic Terrorist Explosive Manual Translation

Summary

This technical document covers a number of important subjects related to chemistry and explosives. It is translated **as is** without verification of the content, the scientific formulas, illustration, and figures. There are a few errors in the original document and the translation reflects the integrity of the original document in spite of the errors. It does not reflect the opinion of the translator.

Most of the information has multi purpose use including explosives preparation, civilian usage of explosives, instructions, ambush, implanting bombs, making different kinds of bombs, modifying present explosive packages, mixing household chemicals to make bombs, etc. The authors appeared to be very knowledgeable of the subject matter. They have extensive knowledge of chemistry and explosives. They could be chemists, pharmacists, chemical lab technicians, chemistry teachers, researchers, or militants in the army. It is apparent that they have a college degree and have knowledge of English and computer. Their names are mentioned several times in these multiple documents. The names are Abu Mos'sallam, Abu Saqr, Ibn Al Islam, Zain Al Abdedeen, Abu Hamza, Keka, Mobile, and other aliases.

The file is a combination of several documents related to the same field, and written or extracted from several sources. The major concept is to teach average people how to make bombs and how to use them against different targets. It is mostly written for the militant people in Palestine to target the Israeli army and settlers. It has several sections that discuss from the basics of explosives to the advancement of urea nitrate, RDX, C4, etc. The last 2 portions of this file contain Q&A and several mixtures (blends) on how to make quick bombs.

Some of the major headlines are:

- Rules of dealing with explosives
- General rules when working with detonators
- Safety rules in transporting detonators and explosives
- The safety rules for transporting and planting an explosive charge
- Some basic definitions related to explosives studies
- External factors that cause to blast the material:
- Results of combustion
- Characteristics of shockwave
- Factors that affect the capabilities of explosives
- Explosives classifications
- Preparing Acetone Peroxide (White Snow)
- Different mixtures (blends)
- Suggested ways and styles to hide (conceal) packages
- Observations that must be considered when hiding explosive packages
- Operation inside buses and bus stops.
- Operations in public places, restaurants, public administrations, etc.
- Using booby-trapped car (car bomb) in execution (Remote control and timing)
- Suitable targets for car bombs

- How to increase the effect of package
- Adding materials to maximize the effectiveness of a package.
- Analyzing an explosive package
- Some collected instructions regarding explosive packages
- Testing Bombs
- Complete training session in explosive
- Explosives used for civilian purposes
- Some explosive materials and their Speed of explosion
- Explosion process
- Materials considered as explosives
- Needed materials to make explosives
- Explosive preparation
- Fundamentals of explosive science
- The effect of explosions. Explosive classification and characteristics
- Knowing the explosives
- Manufacturing explosives
- Making different kinds of gunpowder
- Making activators
- www.totse.com
- rec.pyro
- Continuation of making activators
- Making TNT and Nitroglycerine
- Making detonators
- How to make flammable bombs
- Making directed bombs
- Questions from the audience about explosives and chemicals
- Preparing mercury fulminate for detonators
- Preparing the ammonium nitrate from the nitric acid and ammonia
- Making Acetone Peroxide
- (Um Al Abed) or (White Snow)
- New way to prepare the Urea explosive
- A process to double the urea power
- How to filter the Hydrogen Peroxide
- http://webhome.idirect.com/~earlapcp/Reports/Stills_199x.html
- Astrolite explosive
- Nitro Urea explosive (More powerful that TNT)
- How to make the Black Gunpowder
- Making explosives from A to Z (tested)
- Cords (slow and fast)
- Making detonators

In the name of Allah, Most Gracious, Most Merciful
Peace and prayers to the Prophet Mohammad (Peace Be Upon Him), and peace in front of the Mujahideen, and the saved combatant tribe.

Islamic greetings
Asking God for His blessing and forgiveness

These are the collection of training sessions in the fields of explosives and electronics. I am wishing from God to be used in his blessing, and not to be used for whatever might upset Him. The training sessions were collected from different forums (training gathering) [mostly from the Al Qassam hero forum].

Five training sessions in series:

1. Mujahid 2004 (the word of a truth, he is the first person who initiated these completed training sessions, and was the best among the brothers who put efforts, and was very patient. God protect him. I ask the Almighty for his return to us in peace and as a winner.
Then we have the remaining of other dignified brothers, may God bless and protect them from all evils:
2. Abu Mos'sallam
3. Zain Al Abededeen
4. Various common questions.
5. Ibn Al Islam.

In God's willing there is a room for improvements in the reorganization, arrangement, and making a complete index. I ask my brothers to address only the common questions. I have not included their names and I hope they participate in the dialog. God likes the unknown believer.

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There is a chance for translating other training sessions. Regarding English, there is Abdul Aziz session (an important training session, and most of its materials are translated from the trainings, and questions of our valuable brothers). Then, there is a TERROR book, which is a complete book that discusses simple explosives, and ends with discussing rockets' fuels. There are also some good French files available. Ask the brothers not to deal with distrusted sources of explosive files.
6. You will find a complete file on electronics (75 pages) of advanced information, and I assure you that you will never find it (TC: the information) in any other place. God bless the person who prepared and provided it. It contains files of electronics of everything you can imagine, and most of the vital issues like the timing circuit by using a CASIO watch (18 pages), and how to detonate a bomb by using the mobile phone, or wireless devices, in addition to other issues at the same level of importance. I hope from God that you understand the subjects.
As a matter of fact, we need about four training sessions in order to understand everything in this file. In God's willing, there will be more of that in the future in term of explanation, simplification, and other new issues.

Then wait for the other important and vital training sessions. In God's willing, this will be advancement, and we ask God for success.

Last say: if you know of a way of improvement, don't keep it away from your brothers, and know that whoever is not sharing his knowledge, God will burn him in the hereafter. God bless our brothers who wrote these training sessions, and gather us with them in heaven with other pure Imams.

Finally, I would like to address an important issue, and to be reminded by it all the times. (TC: discussing religious issues of the Imam Al Bukhari, and naming some of his chapters).
In the briefing of "AL Ja'ama' Al Saheeh" which is only included in the prophetic traditions "Hadiths",
Imam Bukhari divided the Jihad section of the book that is divided into the effect of weakness from reaching the prophet (PBUH), and correctness of it on one of the followers.

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"You struggle with your works (efforts), the first step, which is the most important one to any Moslem, is the one faith, and has no boundaries. For this reason my brother, be honest and sincere while working for God, then prepare whatever you can provide, and count on God who will never die. Many works grew tremendously by intention. Intention is the commerce of scholars. Take care of your money and time. As mentioned in the Riqqaq book of Imam Al Bukhari "two blessings are not appreciated by many people, the health, and the leisure time"
(Note: out of the subject, most of the Riqqaq book of Al Bukhari is narrated by Moslem except for 17 Hadiths (TC: prophetic traditions).

Have a good intention with the other brothers, and remember the Hadith of Moslem "oppression is the darkness of the hereafter…", and I ask you to be ethical and patient. Every time A'ysha (TC: Prophet Mohamed's wife) was asked about him, she said: his ethics was the Quran. I swear that I love to be with my brothers in Palestine, or any jihad area, and that is more loveable to me from this place. I approach God and stay away from tyrants, their collaborators, and other Moslem leaders according to their distance from the Sunni and group people.

I say Good-bye, and ask for your blessings.

Rules of Dealing with Explosives

First: Rules of Dealing with Explosives

1. The first mistake (error) is the last one.
2. Explosives don't respect ranks.
3. Deal with them cautiously, with confidence, and without fear.
4. It is prohibited to deal with or to pass onto others any incomplete information.
5. It must be treated gently like a human being.
6. It must be treated every time like it is the first time.
7. It is important to use the lowest possible number of people when working with explosives.
8. It should not be exposed to heat, moisture, pressure, or banging.
9. Don't work with any unknown material or object.
10. Be careful when working with it, in the same way when dealing with poisons, because it is poisonous.
11. Smoking is totally prohibited when working with explosives. "A good Moslem doesn't smoke".
12. Don't burn the dynamite covers, or expose them to banging, because they are rich in explosive substances.
13. Must have an extra caution, and must be careful about the sensitive materials.
14. It is prohibited to work with explosives during the mental disorder.

Second: General Rules when Working with Detonators

1. It is prohibited to carry the detonators on the body "leaning positions".
2. Don't carry the detonator by its third bottom.
3. It is completely prohibited to store detonators with explosive materials.
4. It is important to pay attention to the detonators that show small white or green spots on them, because they are very sensitive, or totally damaged.
5. It is important to pay attention to the detonators subjected to banging, or appear to be scratched.
6. Detonators should not be exposed to banging, heat, pressure, or moisture.
7. Don't ever pull or tighten up the detonators' wires.
8. Applying a duct tape to them should insulate the detonators electrical wires.
9. Don't insert a nail or any object inside the detonator through its special cord.

10. Be careful when pressuring the detonators by teeth, by knife, or any other tools.

Third: Safety Rules in Transporting Detonators and Explosives

1. It is prohibited having explosives and detonators together during transportation or storage.
2. Detonators have to be disconnected from batteries or any other sources of power during transportation.
3. Tie up the shipped materials very carefully in their place to avoid shaking and movement during transportation.

Fourth: The Safety Rules for Transporting and Planting an Explosive Charge

1. Survey and study the area needed to implant the explosive in it. Select the suitable time and date for execution.
2. Select the place and time to implant the explosives very carefully.
3. Select the container to place explosives in it according to implant location and environment.
4. Have a mental image of execution for implant in the same place to discover if there are any mistakes, and to avoid those mistakes in the real execution.
5. Check the roads leading to the location, and choose the safest roads.
6. Get assistance by using animals and by walking to avoid the check points, and it is useful to use the side roads to avoid checkpoints used by the workers.
7. Instructions and recommendations regarding the explosives must be written on a piece of paper as steps by numbers, and not by words. They must be memorized and abide by them.
8. Explosives have to be fastened inside the container (package) by using corks or sponge to protect the entire assembly of a charge.
9. Place the explosive charge in a safe place inside the transportation (place it in a less heat exposure or impacts, hard to discover, and easy to get ride of in case of emergencies).
10. Select the proper timing to transport the explosive charge, and stay away of suspicious times (like late night hours, or during security alert of the enemy).
11. Select a suitable transportation, and stay away from suspicious and burned cars, which are subject for chase by the enemy.
12. Check the vehicle for all mechanical, safety, and security factors.
13. Use the lowest possible number of people to transfer and implant the explosives' package.
14. Check out the road and the place of implantation moments before executing the operation to avoid any surprises.

15. Use a cover to transport and implant the explosives package. Choose suitable clothes that match with the transportation, and the container that carries the explosives.
16. Use disguise items during execution (wig, eyeglasses, etc.)
17. Choose a back up road for going and withdrawing.
18. Have a contingency plan for emergencies.
19. Executioner has to be calm and poised.
20. It is preferred of the deliveryman not be burned or wanted.
21. You must follow the rules of resisting criminal work (don't leave traces, tools, or anything that leads to the executioner's identity, and specially the fingerprints).
22. The explosive has to be camouflaged very carefully.
23. Don't move the explosive package, and don't get too close to it after removing the safety pin.
24. The transporting vehicle must be parked away from the explosive package to avoid linking them to each other.

Because of the danger, I want to warn you about storing explosives at home, and what could cause in term of humanitarian and economical damages.
For those innovative brothers who did very well in the jihad work, and making explosives to continue in their innovation, and to find the suitable way to store explosives away from homes and occupied areas, especially we are approaching the summer, and the heat temperature is getting high, in addition to the general hot weather of this season.

When storing explosives, you must consider its degree of danger, ability for self-ignition, and the level effect of the weather environment (temperature and moisture), and to store each group of the following groups in separate storage as follows:

A. Highly sensitive materials like Mercury Fulminate, Lead Azide, Lead Styphanate, Tetrazene, and whatever these materials used in making detonators (explosive capsules).

B. Nitro Glycerin materials like Gijanite, Gelatinized Dynamite, and Nitroglycerine Dynamite.

C. Highly explosive materials like TNT, Haxogell, Amatol, Tetryl, Pyrogell, ANFO, and Detonation Cord.

D. Pyrotechnics materials like flammable material, and smoke initiator, as well as black powder.

Also you can't store any explosive material with detonators and capsules, or even hand grenades. Detonators have to be removed when stored. Any metal work should be avoided when dealing with explosives to avoid having any sparks that might lead to blasting the explosive materials.

Finally, I hope this subject to be taken into account for its danger, and let us learn the mistakes of others.

God bless you.

The End'''

Explosives

Explosives: are chemical materials and physical mixtures (blends) that have the ability to transform from its current phase into a gas phase by an outside stimulus (impact, bang, pressure, temperature, reaction, explosive wave), and produce pressure and heat.

Some Basic Definitions Related to Explosives Studies:

Combustion: It is an operation of converting the materials from its current phase into a gas phase by the effect of outside factor, and causes a high pressure and temperature in addition to a loud sound called the blast (combustion) echo. This transfer is caused through a strong and quick reaction in the material particles.

External Factors that Cause to Blast the Material:

1. **Temperature**
   There are some explosive materials that explode by heat. The amount of heat needed for the material to blast is different according to the material itself and its chemicals components (chemical stabilization). The heat can come as a result of (fire, friction, or chemical reaction).
2. **Shockwave**
   This affects all explosive materials with a little difference between the sensitivity of materials of shockwaves, which is also associated with the kind of materials, and its purity.
3. **Heat Impact**
   It is a heating process of the materials, then cooled suddenly, and vice versa. Each material has a specific degree for the heat impact.
4. **Impact**
   (The material impacts another object, or the material is hit by another body), and this includes all materials with the condition to fell on the material one time only, with a little difference in the strength of impact, which is needed by every material.

Results of Combustion

1. High temperature.
2. High pressure.
3. Big vacuum (extracting air).
4. Sucking (return of air)

Combustion velocity: it is the speed that transforms the explosive material and measured by meter/second.
Destruction ability: it is the ability of the material to destroy and damage other objects. It is measured proportionally to the TNT ability, and from the speed of transforming the major element in its destruction strength, where the higher the speed means more destruction force.

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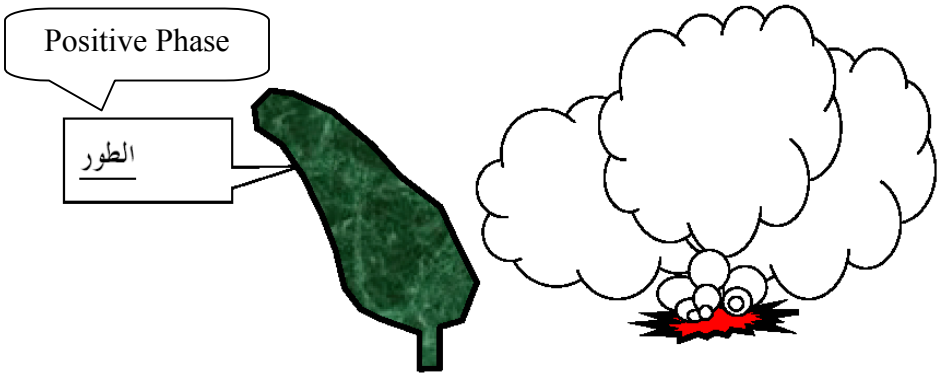
The material produces an amount of gas estimated in 10,000 to 15,000 double the size of the explosive material before blasting. For example: if we blast $1m^3$ of explosives, it will produce approximately 15000 cubic meters of gases in a speed of 8000 m/s, where the pressure is estimated by 108.5 ton/cm^2.

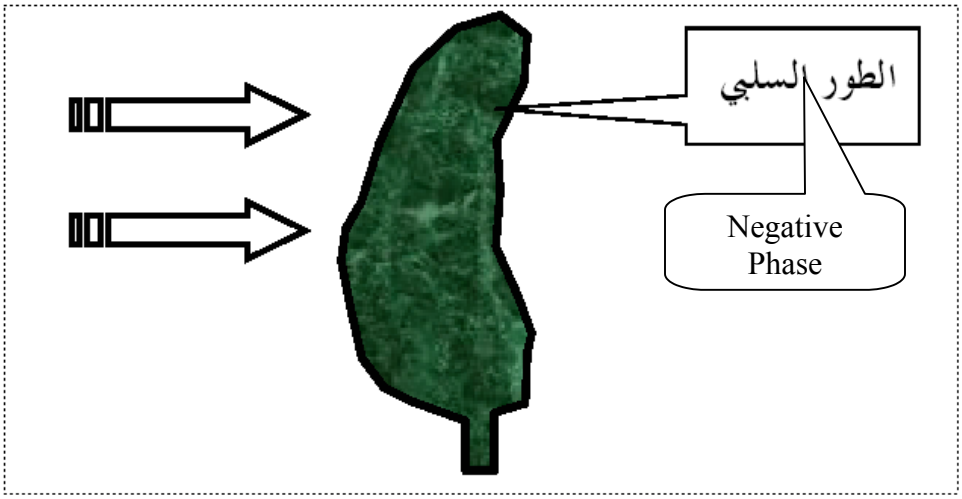
The scientific explanation of combustion: is the conversion of a latent (stagnant) energy in the material through a partial second into a kinetic (moving) energy. The reason that makes us notices the latent energy in explosives, and not to notice it in Benzene despite the power of benzene is 8 times more than TNT. It is the ability of explosive material to be released in a second, while it is released gradually in benzene.

Blasting (combustion) wave (shockwave): it is a form of diffusion of gases associated with the blasting process, and has a form of circular waves. The shockwave has two phases:

1. Positive phase: It is the strongest and the result of pressure generated from explosion.
2. Negative phase: It is generated as a result of atmospheric pressure and after the completion of the positive phase. The strength and speed of the negative phase is estimated by 1/3 of the strength and speed of positive phase.

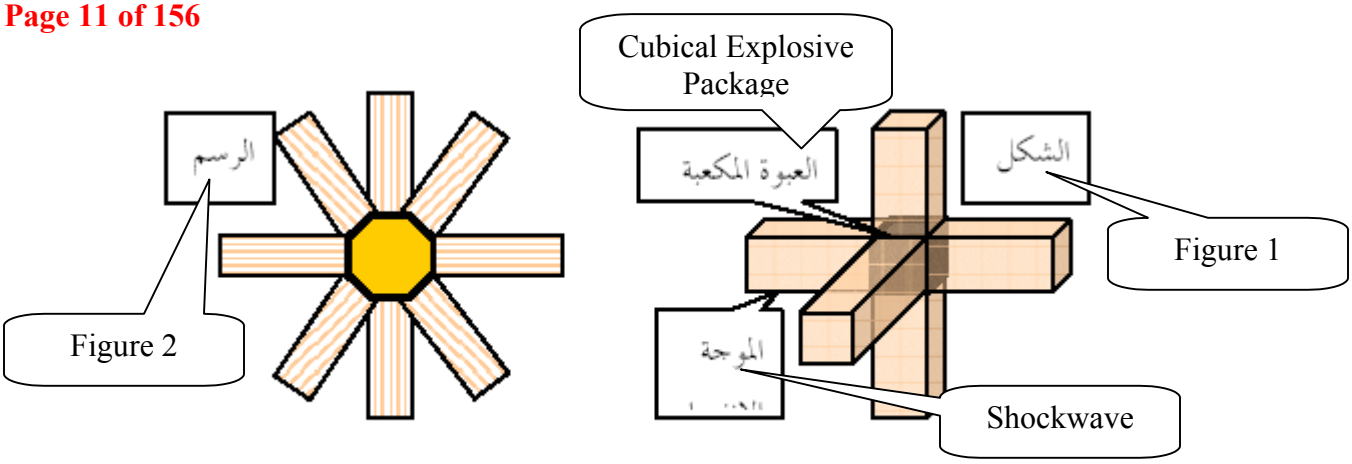
Notice:
It is possible to put flour or aluminum powder where particles of the air are pushed which increases the power of negative phase, and this has a great effect in destroying buildings and establishments, and by using fewer amounts of explosives.



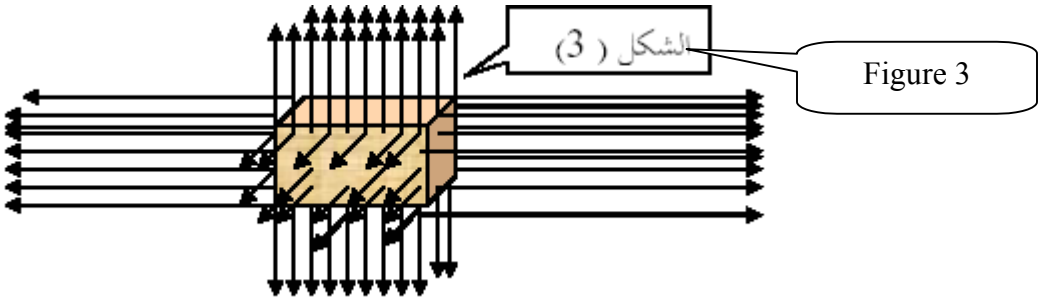


Characteristics of Shockwave:

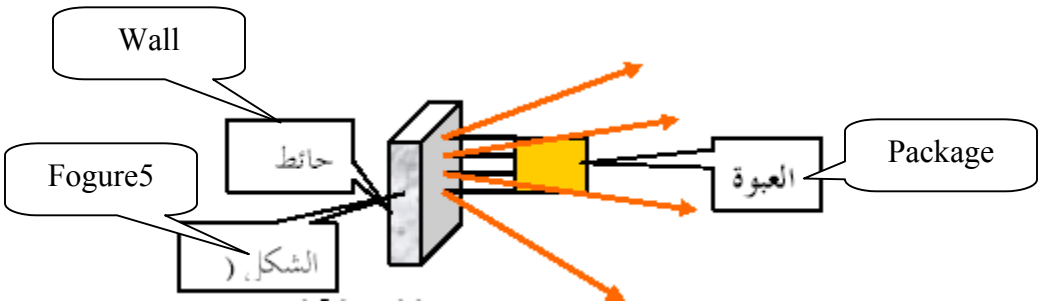
1. It exits in the shape of waves similar to the waves seen when you drop some object on stagnant water.
2. It exits in a perpendicular shape with the surface of explosive charge. When we explode a cubical package in the air and far away from ground or walls, the wave diffuses in six directions, and reaches the same distance as seen in figure (1). If we blast in similar conditions a package of an octagon shape, we notice the wave diffuses in eight directions, and it is perpendicular to the surface as shown in the figure (2)



3. It has a proportional correlation with the dimensions of charge. The thicker the charge, the more blast power, and farther range will have as shown in Figure (3)



3. It has the infection specialty where it might blast another package that is attached to the original package, even if it does not have a detonator.
4. It has the capability of collection and formation.
5. It reflects when impacting strong objects. Look at figure 5 where the arrows illustrate the reflected wave because of the presence of wall.



6. Diminishing the power until disappearance by distancing the shockwave from the center of explosion.

Scope (level) of Damage: It is the distance where the material is capable of destroying the objects completely, and this distance starts from the center of charge to the level that the shockwave is incapable of causing a complete destruction.

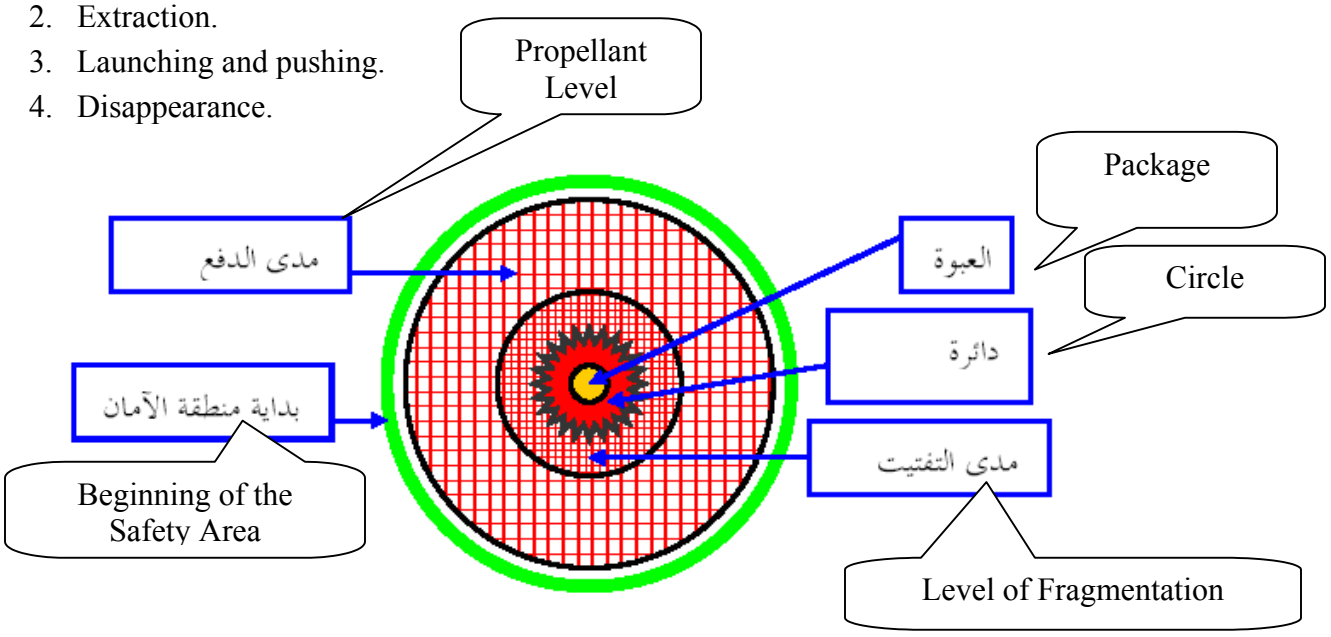
Safety Range: It is the distance that has no effect of shockwave.

<u>There are factors that affect the capabilities of explosives:</u>

1. Kind of material.
2. Quantity.
3. Homogeneity.
4. Sturdiness.
5. Shape.
6. Collection.
7. Surrounding.
8. Benefit of the other assisting factors (shrapnel, benzene, gas, etc.)

Stages of shockwave by its effect:

1. Complete destruction.
2. Extraction.
3. Launching and pushing.
4. Disappearance.



Explosives Classifications

First: According to its presence in nature

1. Solid: could be in the form of granulated materials like RDX, black powder, and compressed molds.
2. Dough shape: like gillnet, C3, and C4.
3. Liquid like nitroglycerine.

Second: according to its speed

Slow explosion:

The conversion of this material by combustion is normal in the air and blasts in case of pressure of ignition of large amount of it. The speed of conversion does not exceed 500 m/s. Some of the slow explosive examples are:

A. Powder used for pushing the shell loads and to spread ignition to the cords.
B. Cordite present in RPG pushing (propellant) charge (RPG and Katyusha)
C. Alistool, which is used to load the mortar shells.

Fast Conversion:

They are the materials and mixtures (blends) that convert from a normal phase into a gas phase very quickly to reach 8500 m/s, and these materials are divided into three sections according to their sensitivity.

a. Sensitive materials: These materials have no chemical stability, and are very sensitive to any outside factor (banging, pressure, temperature, etc), and used as an initiator for explosion in detonators, and in round capsules. Some of these materials are used as an essential material in making sensitive explosive materials like:
    1. **Mercury Fulminate [HG $(CNO)_2$].** The Fulminate was discovered randomly in 1799. It is a mixture (blend) of mercury, nitric acid, and alcohol. It is a yellow sharp granulates, poisonous, and is not soluble in water. If soaked in water (30%), its sensitivity will diminish. Its speed of explosion is 5000 m/s. It reacts with aluminum to make a non-explosive material. Therefore, it is used with the copper, glass, or plastic detonator cover. It is sensitive towards temperature, banging, and friction.
    2. **Lead Azide [Pb $(n_3)_2$]**

It is a white powder and is not soluble in water. Its sensitivity increases with the increase of granulates size. It doesn't get affected with moisture and able to be ignited even if it has 50% water. If exposed to light (ultra violet ray) for long time, this leads to explosion.

3. **Silver Fulminate**: used round capsules and sensitive against banging (hitting).
4. **Nitro Glycerin:** it is a liquid oily material that has yellowish color, shake sensitive and might explode while shaking. It is transported after freezing and starts to freeze at 8 degrees Celsius. It is an essential material in making dynamite and gillnet.

b. **Semi Sensitive Materials:** they are materials that have some kind of chemical stability but sensitive toward the shockwave. They are very quick explosive materials. They are used as charges' booster (to amplify the wave) mediating among the sensitive and non-sensitive materials. They are used as essential materials in making some explosives, and used also as a charge booster in detonators and mines' capsules. They are used as an essential material in detonating cords. They are used as essential charges in the sea mines, and some extra-exploded bombs. Some examples of these materials:

1. **Tetryl –** has a speed of 7700 m/sec, and used in making detonators.
2. **R.D.X**-has a speed of 800 m/sec, capacity (1.6). Semi sensitive, and used in military rockets and shells' booster charges.
3. **PETN**-has a speed of 8400 m/sec, and used in making detonators and mines.

Notice
Semi-sensitive materials dissolve in (acetone, benzene, and don't get affect by moisture)

Non-sensitive materials

They are explosive materials that have chemical stability, and only affected by a sufficient blast wave to detonate them. They are safe to work with. They are affected by outside factors like (banging, temperature, and friction). They are used as essential materials in bombs, warheads, blast packages, and mines.
Some of the examples:

First: C3, C4, C5

A. C3: It is like a paste (dough), and composed of RDX and oils.
   1. Has a yellow color.
   2. Lights up like a gas.
   3. Its blasting power is 1.34 of TNT.
   4. Speed = 7800 m/sec
   5. It is used to cut iron, and with explosive charges booster for detonation. It is called plastic explosives, and used in explosive packages against machineries and personnel.

B. C4: soft and easy to form. It is composed of RDX and oils similar to the oils in C3, but the RDX percentage is higher than C3. It has a white color and ignites like a gas.
Speed = 7800 m/sec.
Blasting power = 1.34 of TNT
Used in cutting iron, explosive charges support, and explosive packages.

C. C5: has a green color, which has the form of strips, and it is the same as (C3 and C4).

Second: TNT and its Characteristics

It is the most popular explosives, and considered a measurement unit to other explosives.

1. It has a yellow brownish color (element of the white color, and becomes yellow when exposed to sun, and brown if exposed to more sun).
2. It exists in a form of hard molds (1/2 pound), 200 grams, or 400 grams, or (?????)
3. Blasting power: blasting speed 6900 m/sec.
4. Poisonous (Toxics) and causes jaundice.
5. Ignites like a wax and gives off black poisonous smoke.

6. If the amount is 200 KG and gets ignited (it might cause possible explosion).
7. It is dissolved within (18-82) degrees Celsius.
8. It is packaged in the form of pounds (American packaging), and each pound is (454 grams). Russian packaging is in a form of a 200 grams type.
9. It comes from Toluene material (one of the petroleum products).

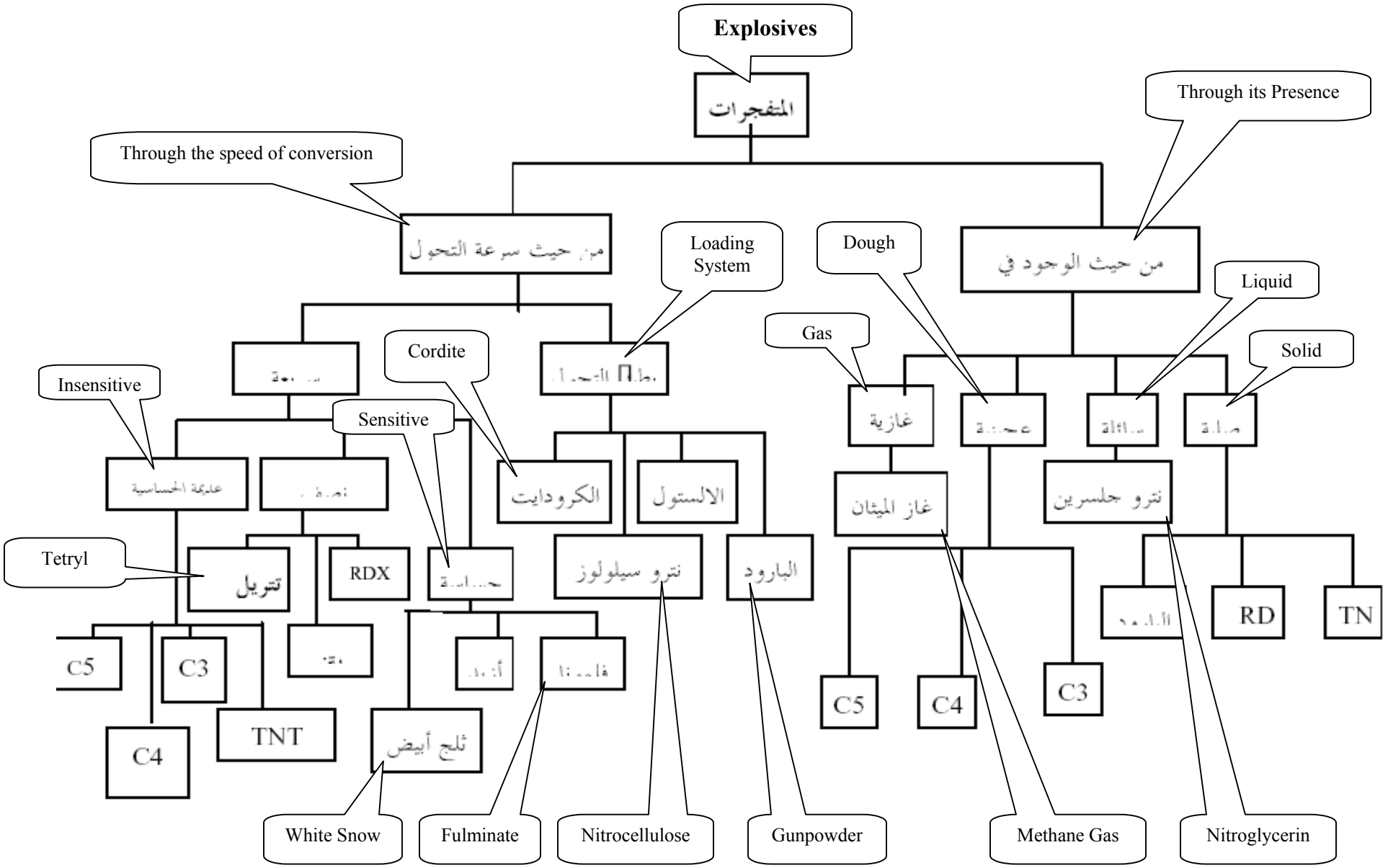
Third: Dynamite:

1. It has the color of brown, yellow, or crystal white.
2. Speed 2000-5000 m/sec.
3. Power (45%-80%) of TNT according to its mixture (blend) with sawdust, and must be kept in (15-20) degrees Celsius environment.
4. It is made from nitroglycerine materials, sawdust, and plastic materials.

The Effects of Damaged Dynamite

1. Color changes to dark blue.
2. Colorless granulates appear similar to the salt granulates that appear on dynamite sticks.
3. Nitroglycerine material is settled.
4. Oily spots appear on the dynamite papers (foils).

The next page shows the graphical listing of explosives listed similar to an organizational chart.



Preparing Acetone Peroxide (White Snow)

First: Needed Materials

1. Sulfuric Acid H_2SO_4
2. H_2O_2 Oxygen water (used for disinfecting and hair coloring)
3. Acetone is used as a nail polish remover.
4. Ice and water.

Second: the percentage of used materials (in volume and not weight)

1 of oxygen water to **1** of Acetone, and add 1.25 of Acid to 5% of the total mix. We start with a little amount to see the reaction.

1. Before preparing the large amounts, we must prepare a small sample (25-50 mixed milliliters) of the available materials by following the same following steps:
2. Mix an amount of acetone with the same amount of oxygen water in a container, and stir very good (it is not important which one is added first)
3. The resulted mixture container is placed in a larger container that has ice where you keep the temperature under 15^o Celsius, which is better, and should not exceeds 60^o Celsius. In the event of a mistake that increases the temperature, cold water can be added to the mixture (blend), or cover the container with a wet blanket when the temperature increases to a boiling level. Add alcohol to stop the reaction, but it will not affect the results.

Notice: Since the internal container is light, it needs to be fastened, and to ensure it is stable inside the bigger container (to avoid flipping inside) by using a robe or a stone. The mixture (blend) weight will drop ¼ after depositing the material, and melting the snow.

4. Add gradually in the beginning 1.25% of the total mixture (blend) sulfuric acid with stirring and monitoring the thermometer where it should keep the temperature at 15 degrees Celsius. If the temperature rises, we can wait a little, and then stir until it gets colder, and so on. When adding the acid, it must be considered to add the drops gradually, and to keep the face away from the container. It is preferred to have a glass cover to avoid the danger of acid when highly concentrated. (When preparing large amounts, the acid has to be added **within 15-25 minutes**).

Notice: It is possible to increase the concentration of the acid by boiling it. Half of the amount is vaporized in the air. If the concentration is very high, and causes splash when added to the mixture (blend), we work on diluting the concentration by pouring the acid into the water (NOT THE OPPOSITE), with a percentage of 1 of acid to 1 of water, and stir during the testing of a small sample.

5. Leave the new mixture (blend) 9-12 hours until a white material that looks like snow deposits (above the Acetone Peroxide).
6. We filter the deposit from water through filtering the water above the container, and pouring the deposit over the filtering paper, or cotton clothe when making large quantities, until the deposit is completely filtered, and then we wash it in cold water more than one time until the acid taste is completely gone from water. (We know that by using a sunflower (litmus) paper, or by putting a drop on a finger, and then placing that on tongue after washing the deposit at least three times until the taste of acid is gone).
7. We dry the deposit through displaying it away from the direct sunlight, and to be flipped before it completely dries, and then making small hard chunks to ease working with it until it dries totally. (The material in this case is very sensitive to ignition as well as banging, and this is before dryness).

Fourth: Storage
If we wish to store it, it should not be displayed, and we keep a blanket above it after washing the collected deposit, and then we tie it up and place it inside a plastic container filled with water, and firmly close it. In order to use it, we follow step# 7.
This makes the material ready for use after dryness. (Ready for blasting by any ignition, banging, or adding acid to it).

Fifth: Calculating the amount of deposit

To avoid making more or less of the needed amount, we do a simple calculation to determine the amount needed to extract the deposit (explosive materials). 100 milliliters of the mixture (blend) gives in its ideal condition 25-37 grams of explosive materials. In other word, it gives **¼ of the mixture (blend)**. The acid amount needed is 1%, 2.5%, to 5% of the mixture (blend) volume. This means for every 100 milliliters, we need 2.5 milliliters of acid. For example: [to start the reaction = heat (temperature) + bubbles then we stop]

//////////////The End//////////////////

Different Mixtures (blends)

1. First one is composed of:
    a. 71% RDX
    b. 6% Zinco oil (Paint oil)
    c. 4% TNT
    d. 11% Dinitrotoluene
    e. 5% Nitro toluene
    f. 3% Tetryl

    Notice: color of the material is yellow to brown, and used as a major charge, which has a high combustion speed, 25% impact sensitivity, and doesn't react with non moistures metals.

2. Second one is composed of:
    a. 94% Ammonium Nitrate.
    b. 2% Potassium Nitrate.
    c. 4% Charcoal.

3. Third one is composed of:
    a. 91% Ammonium Nitrate.
    b. 4% Potassium Nitrate.
    c. 5% Glue.

4. Fourth one is composed of:
    a. 15% Nitroglycerine.

b. 62.5% Sodium Nitrate.
c. Sawdust.
d. 4% Sodium Carbonate.

In the Name of Allah, Most Gracious, Most Merciful

Suggested Ways and Styles to Hide (Conceal) Packages

First: Operations inside the Markets

1. A person can enter the market for shopping, and can carry a shopping bag (not a Samsonite briefcase). He could place the package inside the bag, and leave the bag inside one of the stores to purchase new items. The store has to be in a crowded area so nobody can feel that a bag is left behind.
2. You can bring large packages into crowded markets by placing them inside big containers like margarine and pickles containers, or inside boxes, and pull them on a cart pretending that you are delivering merchandise. This has to occur after checking the market, knowing the delivery times, and the nature of merchandise, and how to make the delivery.
3. A package can be placed inside large boxes similar to the ones that contain Coca Cola, cans, or something similar. It is preferred to use a new box, and to have a writing of its contents, or drawing as shown on the Cola boxes.
4. It is useful to take advantage of the boxes that contain electrical appliances, and to place the explosive package inside a stereo or computer printer box.
5. The package can be hidden inside a 5 KG detergent box, or any box carton, plastic, etc as long as the box or the container has picture and writings that reflect the content of the package similar to the one that has detergent (Persil or Ariel), through the following steps:
    a. Open the container from the bottom and empty it from the inside material. Don't open it from the regular specified area to make sure the container is just bought from one of the stores in the area here. If the brother is checked out (God forbid), they will not think of opening the container and see what is inside, because the condition of the container is the same as a newly manufactured one.
    b. The container is carried as is, and without putting it inside a bag. When putting it inside a plastic bag, the bag must be a clear (see through) bag to avoid any suspicion, and give the hint to anyone seeing the container; it is just a detergent or box of biscuits, etc.
    c. The person entering the market looks as though he bought a detergent box that contains the explosive package from another store, and he wants to purchase some other things. At this time he can place the package inside the selected store, and then searches for

merchandise to be bought, and might purchase some of them, and then leaves aside pretending that he wants to pay money one time only. At a suitable time he leaves the place quietly and without bringing any attention.

Observations that must be considered when hiding explosive packages

1. The package weight must be considered where it has to be compatible with the major container.
2. The volume has to be suitable with the volume of the container.
3. It should not leave any spaces to avoid package movement inside the container. It is useful to use a sponge and cork to fasten it firmly inside the container.
4. You can leave a little bit of the original material on the top to disguise the package in case of inspection, and opening the container from the original specific side. (Leave little bit of detergent in the container on the top. If they open the box, they will find detergent).
5. It is important to pay attention to the center of gravity where the container should be heavy on one side and light on the other.
6. You should avoid leaving any abnormal things on the container like a switch button, wire, or bulb, etc.

In case of a large package, you can bring it to the market over a black cart used by shoppers, or similar to the one used by a merchandise delivery people. The person has to be compatible with the cover in term of dressing, market merchandise, delivery time, and has to carry with him papers or pocket book similar to the one carried by the delivery people to register debt, or give invoices.

He can also leave the merchandise at the crowded store threshold, and can leave pretending he wants to talk with the storeowner, and then he goes to another store, and leaves the entire area with the consideration of the timing of package detonation.

Second: Operation inside buses and bus stops

1. If the operation is going to be in the bus station, and the plan is to be executed inside the bus, it is better to use a handbag, or a Samsonite.
2. If the plan is to detonate the package in the middle of the enemy gathering, inside the bus station; you can place a large explosive package inside a large traveling luggage when the bus station is used for long distance areas, and a large luggage doesn't get the attention. It is also useful to use a large luggage if you want to place the explosive package in the baggage area underneath the bus, and then to get off when the operation does not seem as martyrdom act.

Observation

We can use booby-trapped cars (car bomb) to storm compounds (open markets, open bus stops, closed markets, and closed bus stops, etc).

When the distribution of explosives inside the car is proportional with the compound; it is beneficial to use shrapnel (fragments) in an open and closed areas, and possible to take advantage of using compressed gas cylinders, and gasoline containers in closed area to increase the effect of explosive package.

Storming the open markets and bus stops is easier than storming the closed markets. To storm closed markets, you must find the car entrance, and need to deceive the guard if there is one pretending that you want to park the car in front of the entrance, and then you change the speed gear to a lower speed then suddenly storm the market and kill people by hitting them, and the rest will die from the explosives.

Third: Operations in public places, restaurants, public administrations, etc.

1. In case of an operation inside a restaurant, the package can be placed in the handbag (on the shoulder), or inside a Samsonite brief case while paying attention to the person's shape and clothes to match with the Samsonite.
2. If the operation is inside an official establishment (post office, banks, public administrations), the package can be placed inside a Samsonite.

Fourth: Using Booby-Trapped Car (car bomb) in Execution (Remote control and timing)

1. Explosives can be placed inside the car doors, in the front sides, or front / rear bumpers if they are made of plastic.
2. Explosives can be stored in the trunk with gasoline and compressed gas containers.
3. Explosives can be stored inside the Taxi Sign located on the top of the car. This way insures directing the shrapnel towards the heads, and there should be no restriction between the shrapnel and the target where the taxi sign is made of plastic.
4. A traveling luggage can be placed and tied up on the roof of the car where the explosive package is placed inside the luggage.
5. Boxes and containers can be used and placed inside the car, and near the windows. The windows have to be tinted black, and the car has to be a Station Wagon (SW) or Transit.

Suitable Targets for Car Bombs:

1. Markets' entrance.
2. Stadiums' exits.
3. **Colleges' entrances and exits.**
4. Movie theater entrances.
5. Bus stops.
6. Gathering places (demonstrations, celebrations, carnivals, etc.)

The place has to be checked, and the routes used by the enemy have to be known after the end of a movie, after leaving the college, or at the end of sport game. The car can be parked in a place where a crowd of people passes by. Parking a car nearby these places might get the attention of the enemy, and they might check the car.

In case the car is far from the crowd, it will not get their attention. We have to consider that street allows to park cars to avoid the enemy's attention to the car, and to avoid towing away the car because of parking violation. The car is detonated by a remote control, or timing after careful monitoring, and after determining the time of enemies passing by very carefully.

Observation: you should consider the occasions, nature of the place, the area, dress of the person, and the car to be driven. [For example: during Eid (festivity, celebration), you can take advantage of using the dessert boxes, flowers, or other home plants (where the package is placed inside and covered with sand].

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In the name of God, Most Gracious Most Merciful
Subject: How to increase the effect of an explosive package
Number: 201 k/ 98
Beneficial Party: Special for those preparing the explosive package
Islamic Greetings

How to increase the effect of package (A)

We mean by this address the maximum benefits from the shockwave to achieve the complete goal. The factors can be divided into three major parts:

1. **Technical factor**: maximizing the effect of package is based on:
    a. Package.
    b. Environment and distance.
    c. Target.

A. Package

1. The more explosive in it, the more effect it will have.
2. Classical explosives have greater effects than the known ones (popular explosives).
3. The kind of material has an important role in achieving the complete goal. We will limit our discussion to the materials used, and available to accomplish the goal. For example, destruction (demolishing, digging, establishments, etc). It is recommended to use:
    - TNT to achieve a goal of cutting, or to benefit from the speed of fragments and to be used against human targets. We use C4 (whether the human targets are walking or sitting).
    - It is possible to use both materials to achieve both goals with a proportional difference between them.
4. Shape of material: the more directed the material is (towards the target and intended area, the more it is shaped, and takes cylindrical forms, cubical forms, etc) to the target, the more effect it will have, and will be more economical too in terms of the used amount. Less amount to achieve the complete goal, and the best used against human targets or (?) are two kinds:
    - T.V Shape (figure 1)
    - Cone Shape
5. Thickness of the material: the more thickness, the higher in blasting wave in terms of destruction force and area. Regarding a formed charges, every 3 cm of thickness has a devastating affects on 15 meters distance. (Distance and not diameter).
6. Material power: to increase the power if it meets the following characteristics: (homogeneity, stick together, compressed, assembled, pure and good. When using more than one material, the blasting series has to be taken into account).

1. **Homogeneity**

- This means the same kind of material. For example when using TNT, the whole container has to be TNT, and nothing else should be mixed, or placed with it.
- It is recommended to be in form of the same material. For example, if the used material is powder, the other material has to be powder too. We don't mix powder and solid together even if they were the same kind.

2. **Stick Together (Coherent)**
   - Must be close to each other and have no space between them. (When using TNT, they must be tied up together, and when using cords like Cortex with it, it has to be sticking to it very much).
3. **Compressed:** Especially appears in the paste form like C4 when it is exposed to manual presser, or pressed by hand. To use mechanical presser; there are instructions that must be followed, otherwise the material will explode. The effect will increase and the size will decrease despite using the same amount.
   Warning: highly sensitive materials should not be pressed by hand or other ways. The one that blast without military detonator and especially for the popular made materials like **Hydro Peroxide Acetone.**
4. **Assembled**. The material is assembled into one spot. The center of forming is a spherical, cubical, or cylindrical shape. Spherical shape is considered the best shape because it gives equal effects in all directions considering the target and surrounding.
5. **Chains Explosive:** We mean by that, arranging different materials used in one package and considering their degree of sensitivity. For example, a package composed of detonator + popular materials + C4 + TNT has to be arranged as a detonator, TNT, C4, and popular materials. If there are disarrangements in this, some parts of the package might not explode, and consequently the affect will be less.
6. **Purity and Validity:** The higher in purity means a higher effective material. More distance from the moisture means, more and powerful affect. We mean by purity, by not having dirt during the manufacturing (primarily in the factory). Material validity means it is not affected by the atmospheric factors or moisture. For example, we distinguish that through the kind of materials like white TNT, which is more pure, and when the color changes to brown or black, the purity is lessened or affected greatly by moisture, and fungus appears on the material, and this eliminates the effect to a certain degree. We need for the rest of material a strong activator, and to consider checking the color not by looking at the surface material only, but by scratching or breaking the mold to see the true color of the material from inside.
7. **Blanket or Deterrence:** It is the materials used in forming the package, and usually placed in the direction of the target, and the detonator affects the direction.
   - **Blanket shape:** the package is shaped with the shape of the used padding.

- The more increase in the area of diameter of the padding, the more increase in the package diameter we get, and less distance. The distance increases with the increase of explosive thickness.
- Kind of Padding: It is recommended to use copper, and then iron. Also other kinds can be used (glass, etc) to form the package, but the effect in metal is a lot greater.
- Padding Angle. The best angle used for the formed and directed explosive packages is from 120^{o}-145^{o}. These angles are used to hit walking or standing human targets.
- Thickness of Padding: The more thickness, the less effect of the package, because large portion of the shockwave will be directed to cut the padding. Therefore, the thickness should not exceed 2 cm for 8-10 KG of TNT (we are not talking about the fragments with the knowledge that we can cut (shear) the padding to get the benefit from it as fragments). Notice: using any padding likes cartons to form the package, and using fragments directly without considering the thickness.
- Fragments: The best to use is 6 mm metal balls against moving human targets, and 8-12 mm for the settled targets according to the amount of material. To make fragments have the highest affect, they must be characterized as:
  - Spherical.
  - Regular and arranged in lines with no space among them.
  - Should not exceed 1/6 of the explosive thickness.
  - Stacked together with adhesive that keep their regularity, and should not have spaces between them.
  - Put small pieces in the upper layers.
  - If the metal balls are not available, nails and screws can be used with a thickness of 8-10mm, cut into 1 cm pieces, and placed in more than one layer to avoid melting them by the explosive material.
  - Poisonous (Toxic).

8. Place of Detonator
   - The detonator's bottom is directed towards the target.
   - It is placed in the middle of the outside surface of the material.
   - It is inserted into the middle of the first third of material (the bottom half of the detonator must be surrounded by the explosive material).
   - In case of using more than one detonator, they have to be of the same kind (same number written on the bottom or all of them have to be without numbers, because numbered detonators are delayed, and don't explode immediately).

9. Charge Support. It is a material that has a high speed and power, and used to activate the weaker materials. It is also used to amplify the shockwave. For example, we use white paste of C4 as a charge booster to TNT, and taking into account the explosive chain.

Notice: Detonator assures the blast of 5 KG TNT sticks, and may be more than that. For more amounts, it is recommended to use a charge support in the amount of 20-25 grams for every 1 KG of TNT. The detonator is placed inside, and attached to the material. If we could not get C4, we can use more than 2 detonators for blasting with the knowledge that, in most cases, regular detonator does not detonate a tank mine unless a charge booster (support) is used, because of less purity of the used explosive material.

10. **Adding materials to maximize the effectiveness of a package and to increase:**

- **Sound and Flame:** We place next to the charge, a compressed gas container, or used within closed environment.
- **Flame:** By placing benzene in a container next to the package.
- **High Temperature:** We add a soft aluminum powder to the explosive package.
- **Flammable:** We place a mixture (blend) of Molotov or Napalm in containers next to the explosive package.
- **Smoke:** We place dry starch, flour, or white cement.

11. **Location to place the explosive package:**

- The package has to be perpendicular to the surface of the intended target that needed to be destroyed.
- If it is against personnel, it has to be directed towards the level of heads and chests.

1. Perimeters and Distance

There are three situations concerning the package-implanted perimeter.

- The package is placed in an open place.
- The package needs to be contained, and used in this case to destroy establishments. Most of the times where the package is placed near bridge columns, and sand bags are placed above it or it is used in a closed environment like a room.
- The package has to be covered. This means a hole has to be made to place the package in it, and then it should be covered. In these cases, we find that if we use the same amount of explosive for the same target, we find the effect of the third is the strongest, the second is stronger, and the first is strong. For information, the effect of material in the middle of water is more than its affect in the dry land for the speed of transferring the wave in the water.
- This will make notice that the more closed is the environment that surrounded the package, the more effect it has. In the future, we will explain this phenomenon scientifically.

<u>Regarding the increase of package effect to the farthest distance, this is related to:</u>

1. The thickness of explosive material. As we said for example, 3 cm of explosive affects a 15m-distance killing range.
2. The shape of charge (package).
3. We must know that every package causes after its explosion 4 circles from the outcome.
   - The circle of complete damage is the range of detonation. It is the affect of an explosive material without a detonator. It will explode, cause within that detonation, and emit too.
   - The cutting and emitting circle: it is the range that causes for any solid body to be cut and emitted (thrown away).

- The emitting circle: It happens as a result of the strength of produced gases, which pushes any body within the circle without causing a direct damage, and throws it away.
- The safe sabotage circle: It is the last range affected by the wave, and the effect is zero there.

Notice: it is important to benefit from the whole distance that is affected by the shockwave. It is not good to strike a crowded street with pedestrians by the width; the most damage of the wave will hit the stores and walls.

C. The Target

We did not discuss material targets. We will give it a detailed session, and we will only cover the human targets (pedestrians), or the loaded targets (machineries that carry soldiers). There is a question and would like to have your answer if you know the theories on how to deal with each theory. Write the amount of used material, its shape, and location of placement?

1. Martyrdom Operation: Mujahid wants to carry a package in the middle of crowded human gathering in a closed environment?
2. Implant the package in the middle of human gathering (not crowded), and not in a closed environment.
3. Martyrdom operation within five settlers. The sacrifice magnitude should not exceed the results.
4. Bus loaded with soldiers and the goal is to get rid of everyone without having a martyrdom operation. Write the theory of this plan that will achieve the goal, and determine the amount, shape, and place of package. (We will have one section on how to use military science intellectually in fighting occupation).

(Islamic prayer and greetings) Please God give us the useful knowledge, increase our acceptable knowledge, work, peace, and mercy of Allah to be upon you.

/////The End/////

Subject: Summary of Analyzing an Explosive Package

First: To calculate the degree of spreading of an explosive package; (it is the angle that makes fragments spread covers the whole distance of specific target).

Tangent of the half angle of package = Opposite (half spread distance of the target in meter) / Adjacent (the distance of explosive package from the target in meter)

(#) The angle of forming the package (degree) = ½ the angle of forming the package x 2

Second: to Know the Number of packages

When using more the one package for the target, we use the following law (formula), and consider if not having a dead area among the packages that are not reached by fragmentations:

Number of packages = the complete distance of the target and row in meter / (the range of fragmentations spread for every package in meter x 0.8)

Notice: when the 145 degrees angle does not cover the total target, we use more than one explosive package to cover the target totally. (The highest degree allowed to use is 145^{o})

Third: Calculating the inclination angle of package on the ground surface

The angle has to be = zero.

This means the package has to be perpendicular to the middle of the target first 1/3.

Height degree = Opposite (dead area that not affected by fragments from ground surface to the height in meter) / Adjacent (package distance from the target in meter)

To find the angle, press (**Shift + Tan**)

To calculate the package inclination from top to bottom, we use the same law:

a. Length (long line)

b. Width (wide line)

Fourth: Calculating the shrapnel (fragments) spread in cm^2

Number of fragments = the target area (cm^2) / fragment spread area (fragment/cm^2)
Notice: the reasonable area to be used in fragments' spread is 255 cm^2 for side targets which is the minimum (1 fragment for every 15 cm^2)

Fifth: Knowing the length and width of a package in centimeter.
To know that; we should know first the number of fragments in the package length and width:

$$\text{Fragment length} = \sqrt{\text{Number of fragments} / 2}$$

Package width = Package length x 2

Package length (cm) = Number of fragments in the package x fragment diameter (mm) / 10

Package width (cm) = Number of fragments in the package width x fragment diameter (mm) / 10

Six: Calculating the thickness of explosive material

It is assumed that the thickness of fragment layer should not exceed 1/3 of the explosive material when a military material is used.

Explosive material thickness (cm) = Fragment diameter (mm) x (6)

The higher the number multiplies by the fragment diameter, the higher the effect and the farther in distance. The lowest number allowed is (3).

Seven: Calculating the amount of explosive material
To calculate the needed weight of a package, we use the following law:

Explosive weight (gram) = Package volume (cm^3) / (6)

Package volume (cm^3) = Length (cm) x width (cm) x thickness (cm)

Eight: to calculate the radius used to draw the angle, we use the following law (equation):

Radius (cm) = [Package length (cm) ÷ 0.0174606] / Angle of forming the package (degree)

Nine: to calculate the approximate percentage of making the white snow, this is 20-37% white snow of mixture (blend) (Acetone + Oxygen Water)

The amount of explosive needed (kg) = 25 x mixture (blend) volume (liter) / 100

In other word to calculate the needed mixture (blend):

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Volume of needed Mixture (liter) = Explosive amount (kg) x 100 / 25

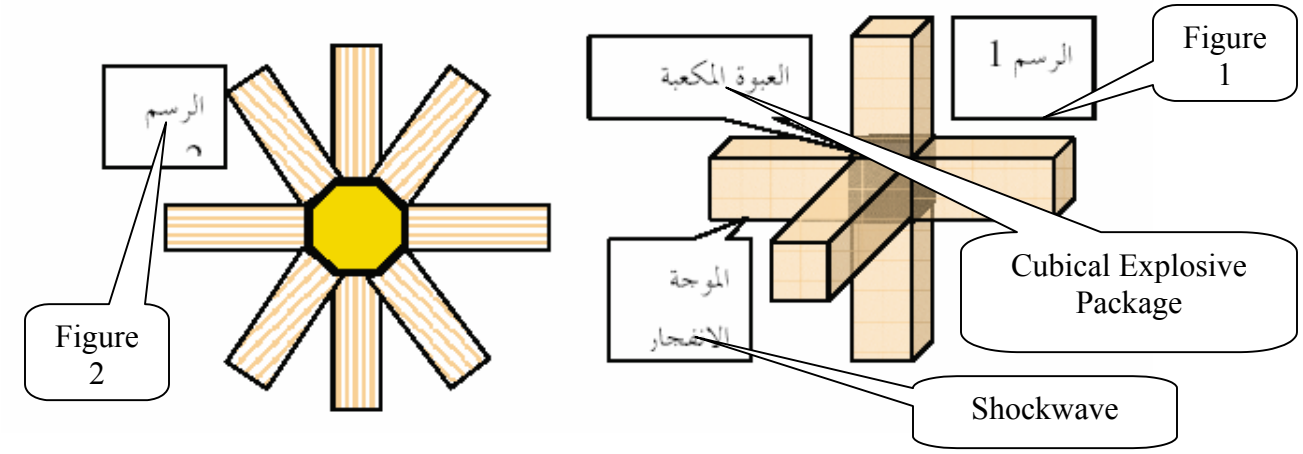
/////The End//////

In the name of Allah, the Most Gracious, Most Merciful

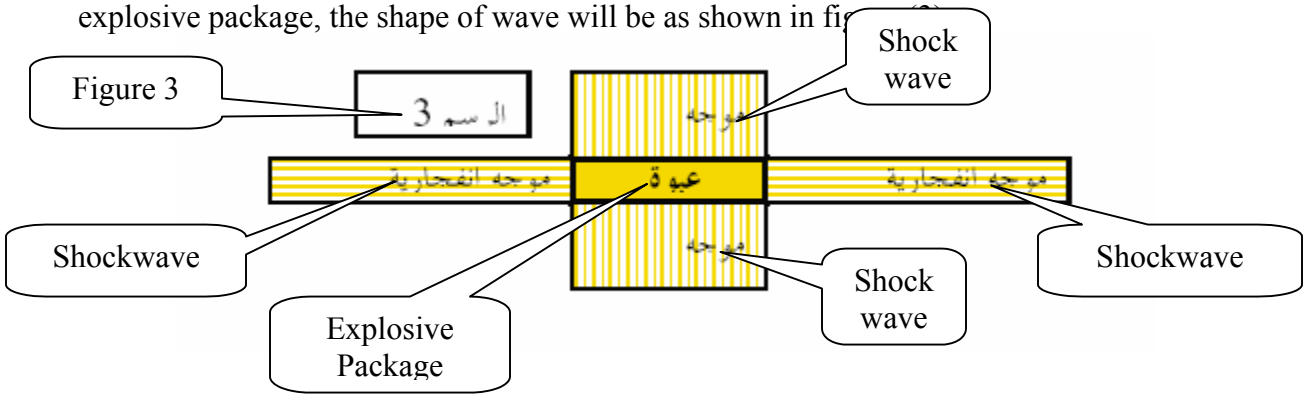
Some collected instructions regarding explosive Packages

To increase the effect of package, it has to be formed according to the nature of target (people, cars, buses, soldiers' vehicle, tanks, etc), and according to the location of placing the package, where the package design is different in design for the bus from the explosive package designed to be placed on the roadside to hit personnel. Also the shape of the package is different for the one implanted in the marketplace to hit personnel, to the package placed on the side road to target personnel too. We will show you some samples of packages to some targets. But before we do that we will give some rules to help you in the subject while making explosive packages.

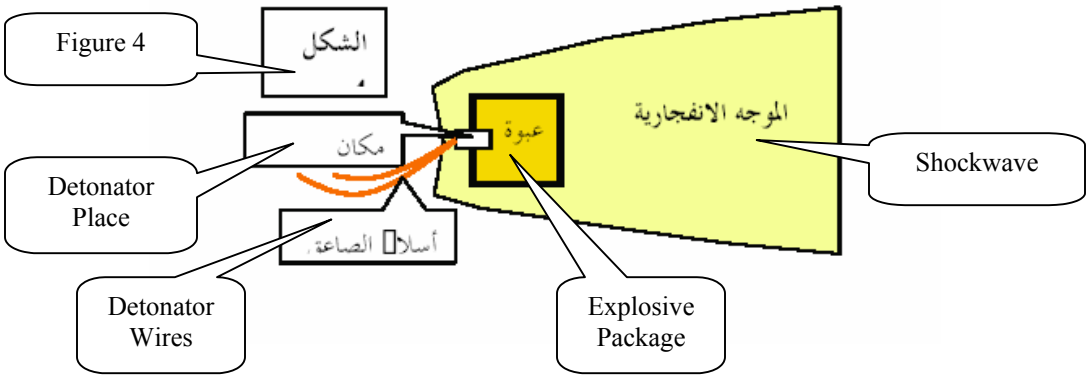
1. The shape of explosive wave takes the shape of package, and the explosive wave exits perpendicular with the shape of the package surface. If we blast cubical package in the air, and away from the earth or walls, the shockwave moves in six directions, and reaches the same distance as shown in figure (1). If we blast within the same conditions an octagon shaped package, we notice the shockwave goes into eight different directions, and perpendicular with the surface as shown in figure (2).



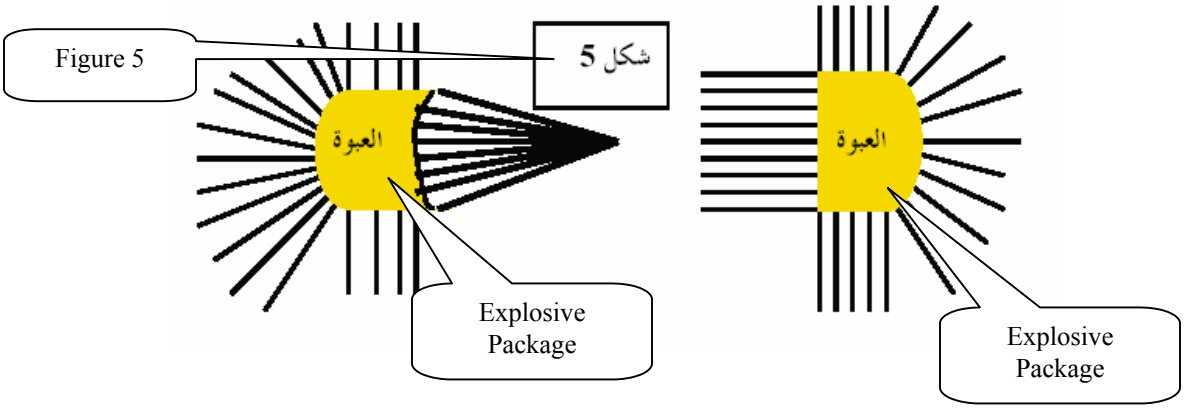
2. Shockwave is proportional with the material thickness. The thicker the material, the stronger shockwave, and a farther distance we get. For example, if we blast a rectangular explosive package, the shape of wave will be as shown in fi



3. The place and direction of a detonator affects the shape of the shockwave and direction of its strength. The strength of wave goes to the opposite direction of the detonator location, and the detonator must be inserted 3 cm inside the material. Look at figure (4)



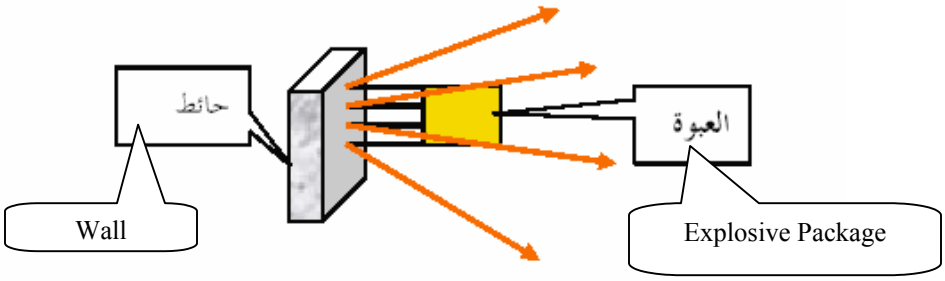
4. The shockwave exits perpendicularly with the material surface where if the outside surface of the package is straight, the placed fragments on top of the package go in the direction of that straight line. If it is curved, the fragments will dissipate (spread). In case of a concave (dished) shape, the fragments will congregate. Look at figure (5)



5. Shockwave gets weaker and disappears to limit the effect. When it is at the peak of its power near the closed circle to the explosive center, it detonates any impacted object. After it gets farther from the explosion center, it is weaken slightly, and we see it breaking apart any object that hits by it. Then after it gets farther, it gets weaker and its effect is limited to pushing objects that impact it. After that the effect of a shockwave disappears until it reaches zero. The reason for that is, produced gases from explosion dissipate, and pressure drops, its speed reduced, and its affect are lessened. The borders of the wave influence depends on the diameter of detonating circle, break up, propulsion, or disappearance on different factors, some of them:
   a. Kind of explosive material. Higher power causes higher effect.
   b. Amount of explosive material. More amount causes farther effect.

c. Material homogeneity. The package has to be made from one kind of explosives otherwise we need to use more than one kind. We don't randomly mix, and we arrange it where the strongest material is closer to the detonator, and then the weaker. Example: if we have an amount of TNT and C4, we put C4 material around the detonator, and then we put the TNT around the C4 (look at figure 7). The material itself has to be homogenous. We mean by that, if you have an amount of grounded TNT, and stick TNT, don't mix them together inside the package. This will weaken the package. You can grind the sticks to become similar to the other TNT, and then put it in a container, and press it. Also the C4 has to be a paste (dough shape), if there are several molds to become like one mold, and then place it inside the container (package).
d. Pressing and Coherence: the material has to stick together and be pressed. The more pressing means more powerful material and this applied to the military explosives TNT, and C4. It is prohibited to press the material when the detonator is inside it. You must press the material before putting the detonator, and after the pressing we dig a place for the detonator by using a piece of wood, and then we place it into the material (charge). It is prohibited to press the popular explosives like (white snow).
e. Containing the explosive material gives it more power. Example on that, if you put a mold of TNT between two rocks where it is surrounded from both side, it will break the two rocks. When you place it nearby the rock where it is free from the other side, you will notice its simple affect on the rock, because the shockwave is just gases, and as we mentioned always, they look for a weak point to exit from. When placing a side package to a car or a walking patrol, it is recommended to have the package placed near the rock where the rock is located behind the package, and the target is in front to get the most benefit of the shockwave where it goes towards the target direction. Also the effect of the package in closed environment (inside rooms and buildings) is more than the open environment (outside the buildings).
f. Fragments: Where the effect of fragments wrapped package is multiple from the package without fragments. The reason is, the fragment has a mass and weight, which will help overcome the air resistance. When exploding, fragment flies at a speed of 7000m/sec, which penetrates the bodies. The evidence of that are the hand grenades. Hand grenades are called by an attack grenades (or sound), and do not have fragments, have 5 meters of killing range in spite of their contents of more explosive amount from the defense grenades that have a killing (detrimental) range of 35 meters because of the fragments. The grenade cover is made of a thick polygon metal.

6. Explosion (blasting) wave is reflected if impacted a strong barrier, and rebounds (ricochet). Look at (figure 6) where the arrows illustrate the reflective wave because of the wall.



Now after we knew the nature and characteristic of the shockwave, and this knowledge will make us benefit from the maximum level of the shockwave power? We will introduce you (Mujahideen) to some samples of a package shapes according to the nature of targets.
Some observations and rules in designing explosive packages to obtain the maximum level of benefit:

First: if the package is placed inside buses

A. When placing the package in the handbags compartment above the passenger head, it is preferred to use cylindrical shape packages with fragments as shown in drawing (S).
B. When placing the package inside the bus but outside the specified passenger area. Here it can be placed in several locations:
   1. In the luggage compartment of travelers: the package must be placed in a strong container to keep protects it from impacts and pressure inside the box specified for travelers' luggage, especially if made of the white snow.
   2. Can be placed near the fuel tank.
   3. Can be placed near the wheels and in the wheels joints, and the driving (rotating) shaft, or near the front wheels shafts as a priority.

It is preferred always to use fragments for the following considerations:

a. Fragments in the surrounding center increase the blasting pressure.
b. Fragments penetrate the bus frame easily, and useful to hit passengers and pedestrians.
c. If the fragments placed towards the personnel, and the remaining body of the explosive without fragments, this situation gives more benefits (every action has an equal and opposite reaction). (TC: Newton's Law)

Regarding the location of placing a package in a situation like this:
Consider the use of:

- Fragments
- Detonator's direction.
- Increasing the thickness of the package.
- Considering the weaker point towards the passengers.
- No luggage above it.

Second: in case of using side packages against buses and cars:

1. Directing the package towards the target is not sufficient, but it has to be formed to have a higher affect in God's willing.

2. When selecting a location to put the package, the conditions to select and ambush a place have to be taken into account. The target has to be moving slowly, and the speed should not exceed 20km, otherwise controlling the detonation time will be difficult. If the delay is one second, the target will be escape away from the affect of explosive package, this if the target is moving fast. For knowledge, the car driving in 50km/h speed passes 14m in one second, and this means the target is outside the affected range of the package, and will not be much harmed. If the target is driving 100km/h, it will pass 28m in a second and will not harm.
3. Using the proper shape to form the package, there are several shapes for directed packages, and its shape is controlled by the target area, kind of target car/personnel, the distance of package from the target, and from the suggested shapes.

First: concave (dished) directed package:

This package is used against a mechanized target that is hard to hit till 10-15m distance and specifically cars. The following must be considered:

1. The wall of the used cylindrical container must be from metal, and preferred to be thick to get the benefit of the shockwave in one direction, which is the target direction. We suggest the use of small gas cylinder (similar to the one used in camping), and also can benefit from the metal cylindrical pipes (6"). When using the gas cylinder, the following steps have to be considered:
   1) Cutting the gas cylinder from the bottom. **Fig 4**
   2) Opening the gas cylinder from the clock location by inserting an explosive material, and placing the detonator. **See Fig 1.**
   3) Bringing a metal plastic plate with similar diameter of the gas cylinder and concave (dished) (3-5 cm). **See Fig 3**. It must be before putting the explosive material inside the cylinder. **See Fig 1.**
   4) Placing the plate on the bottom of the cylinder where the concave (dished) is directed inward [we benefit from the welding (soldering), duct tape, or silicon].
   5) Fragments are placed to the plate wall, and may benefit from the adhesive materials in case the fragments are not equal in size, where the larger ones are placed next to explosive material. Then we thicken the fragment layer in the middle.
   6) The thickness of explosive has to be 6 times of the thickness of fragments as shown if **Fig 1 and Fig 3.**
   7) Use ball shaped fragments (steel balls) in a diameter of 8mm or 10mm. It is preferred to place two layers.
   8) When gluing the package, it has to be parallel to the ground, and perpendicular to the middle of the bus. (Use water scale) or [Mercury scale]. Its height from ground is ½ meter lower than the bottom edge windows as illustrated in **Fig 6**.

9) In case of having difficulty in using a gas cylinder, we can use margarine tank (7kg), milk container, or something similar.

Second: curved directed packages

These packages are used if the target (bus or car) is closer than 5 meters, and the Mujahid could not design the televised package. It is beneficial to use the gas cylinder, margarine container (7kg) with the use of a concave (dished) plate as shown in the previous package. But in this case, the plate is turned where the curve is pointed outward, and the fragments are placed from the curved side of the plate, and the concave (dished) side is toward the gas cylinder where it will be filled with explosives in order to give dissipation to the fragments where it will cover the target. **Look at the figure 2 and figure 5.**

Also this kind of packages is used to hit stationary of moving personnel (walking patrols or gathering, bus stops, demonstrations, markets, etc)

Observations about cutting the gas cylinder:

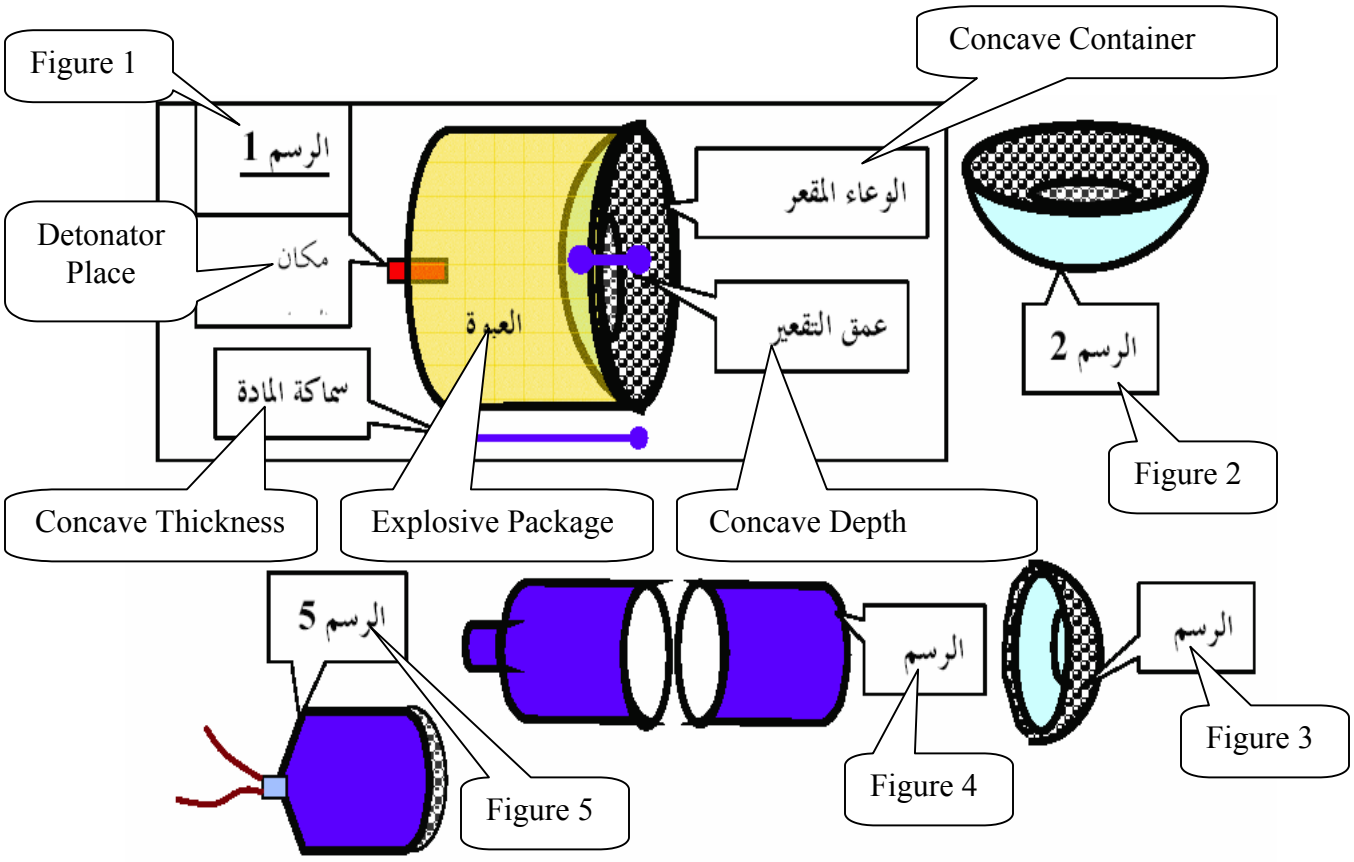
1. The cylinder has to be discharged completely of gas.
2. Remove the gas lock (sealant).
3. The cylinder should be washed several times by water and should be filled with water completely.
4. It is preferred to do cut by using a hand saw.
5. Must be careful to disguise the package very carefully, and resist the forensic work.

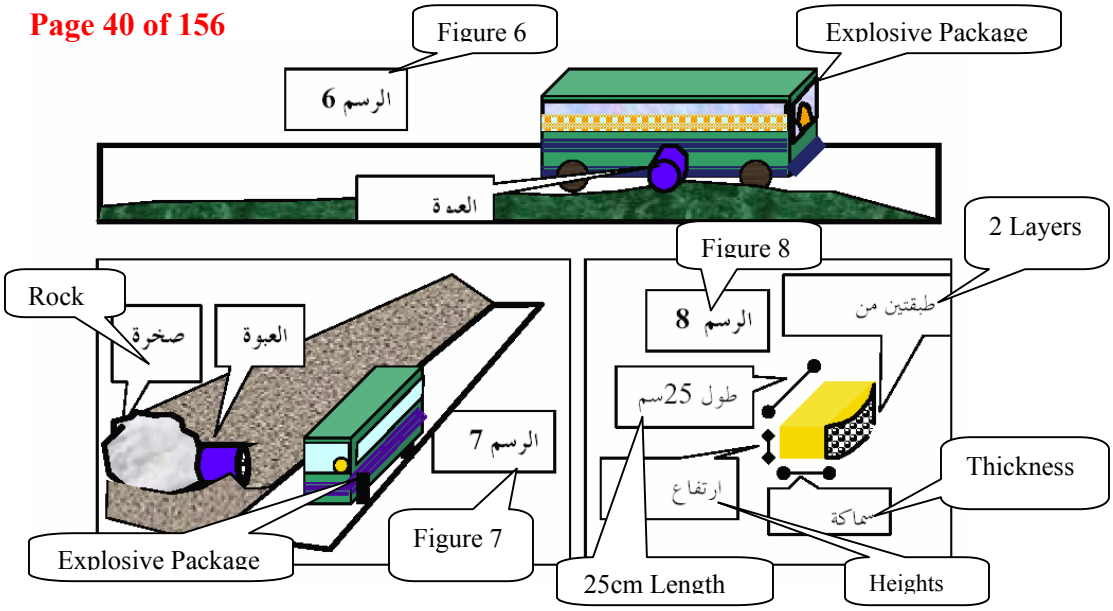
Advises to implant the package:

1. The package has to be above ground where it should be at the half height of the target, parallel to the ground and directed toward the target precisely.

2. In case of the rocks and walls presence, the package has to be placed where the wall or rock is placed behind the package and sticking to it in order to release all the shockwave towards the target as shown in **figure 7**.

3. The detonator (flash or bulb in the white snow case) has to be placed from behind where it will in the middle and perpendicular to the target as shown in **figure 6**.





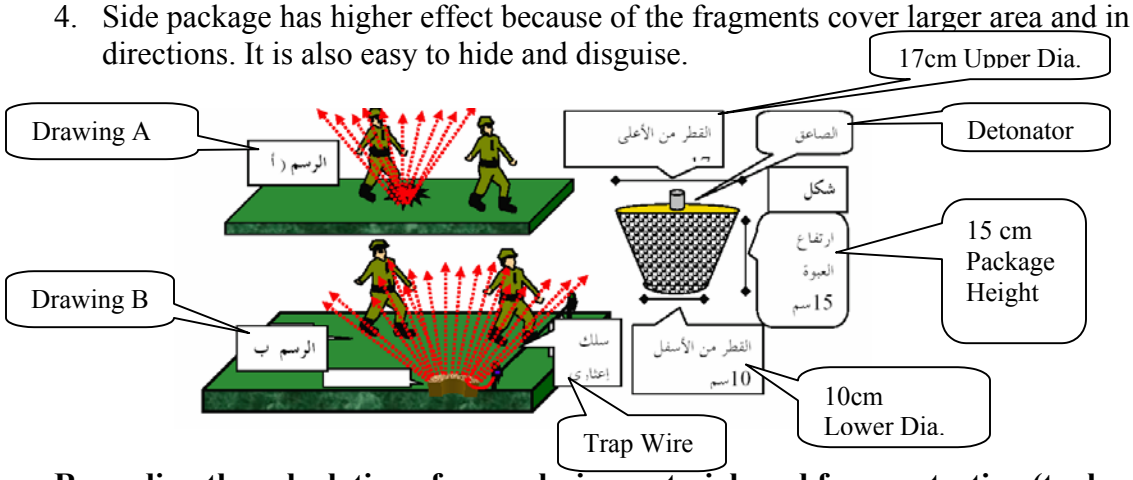
Observation: when the package is curved, it is not a condition to be cylindrical. For example, we can use the parallel rectangular like the wood box, or Mazola oil gallon (5KG) where a suitable container is selected for the package, and the length of the target is considered (the length of the soldiers or the settlers line). This package is called a televised package because it looks like a TV unit. The following factors have to be considered:

1. The material thickness has to be 6 times the fragments' thickness.
2. The best fragment against personnel are 5-6mm balls or screw nuts.
3. The length of the package has to be double the height.
4. The package front should be directed towards the target in a semi circle shape. Look at **figure 8.**

About planting mines: Classical anti personnel mines are not recommended for use, and is not advised to copy it for the following reasons:

1. Their effect is limited, and for the person stepping on the mine by foot even if other personnel are around him, they will not be harmed if they are few meters away, because the shockwave is pushed upward. Even if we put fragments, they will be an upward thrust, and will not scatter to the sides, because the side fragments will enter the sand where the mine is buried. Look at **figure (a)**. With the exception of the televised mine, as well as the spring and jump mines, and Bangalore (which is just a tube filled with explosives, and works on tension and suspending stress).
2. Buried mine does not explode unless it is pressed enough, and the area for the soldier to press on it is very small (foot place). Therefore, it is highly possible for the enemy to pass without exploding a mine. But in the side packages: there is a chance to put wires across the road where it explodes when a soldier touches the wire, and the chance of escape by the enemy is very limited. Look at **figure (B).**

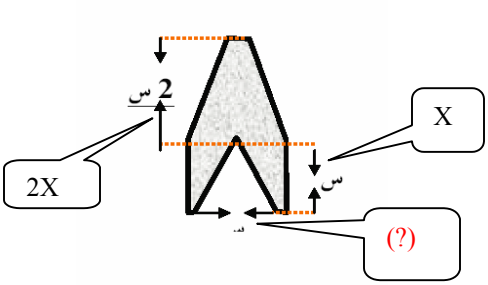
3. Difficulties in digging, planting, and hiding the mine later on.
4. Side package has higher effect because of the fragments cover larger area and in all directions. It is also easy to hide and disguise.



Regarding the calculation of an explosive material used for penetration (tanks and others)
To calculate the amount, we use the following law (equation):
Calculating the ideal position of the angle of formation:

Angles used for penetration are from 45° to 65°.
Here is the law:

- Cone diameter = cone height
- Explosive material thickness = 2 cone height
- Package distance from target = cone height
- Penetrating the target = 2 cone height



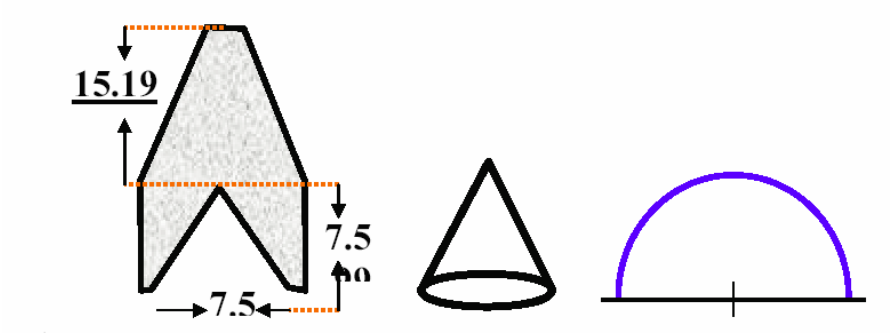
Some definition of terms:
R: Cone depth (cone height)
B: Cone diameter
I: Cone base perimeter (Circumference).
D: Package distance from the intended target to penetrate.

The law is:
R = 0.447 S
B = 0.447 S
I = π B

Cone drawing angle = I ÷0.01746 ÷ R

Question:
A piece of iron has a thickness of 17 cm. Find the cone dimension, and its shape angle.
Solution:
We find the value of R, which is 17 x 0.447 = 7.599
We find the value of B, which is 17 x 0.447 = 7.599
Cone diameter = 7.599cm and cone depth = 7.599cm
To calculate the circumference shape (formation) angle of the cone, we use the following law:
Angle of cone drawing = I ÷ 0.01746 (constant number) ÷ R
I = 7.599 x (22 ÷ 7) π = 23.882
Angle of cone shaping = 23.882 ÷ 0.017464 ÷ 7.599 = 179.998 degrees, about 180^{o}.

How to make the cone: after calculating the dimension and circumference, we do the following:
We bring a piece of copper, which we intend to shape. It is preferred to have 2mm of thickness.
We draw a straight-line 180^{o}. (The calculated angle)
We put a dot in the middle of the line. We open the compass to distance of cone depth that is 7.599.
We place the head of a compass in the middle of the straight line, and draw a semi circle as shown in figure (N).
We cut the shape and fold the piece in a cone shape, and we get the resulted cone in a 7.599 diameter, and 7.599 depth.

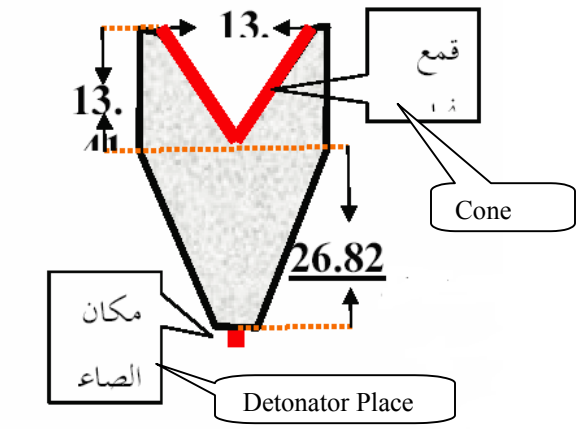


Observation:
If the package is away from the intended surface needed to penetrate, the power of penetration is reduced, and we double the amount.
Example: the package that penetrates 17cm at a distance of 17cm will penetrate 8.5cm from32cm distance, and penetrates 4.25cm form 49cm distance, and so on. If we wish to place a package to penetrate the bottom of a tank, where we can place the package in the bottom of the tank, and pointed upward. The package will be 70cm away from the intended surface to penetrate, the tank height is 60cm, and the dust thickness above the package for hiding concealment is 10cm. Here we have to design a package capable of penetrating 20cm thickness of metal. The package here penetrates 20 cm metal from 20 cm distance and penetrates 10cm from 40cm distance

and penetrates 5cm from 80cm which is suitable. For precaution, we use the package dimensions capable for 30cm distance in metal.

To calculate the cone dimensions and the shape angle, we follow the previous law:

Solution:



Cone diameter = 20 x 0.477 = 13.41cm
Cone depth = 20 x 0.447 = 13.41cm
Cone shape angle = 180 degrees
Need 5 kg of C4 explosives.

Cone thickness = 5mm to 7mm of copper metal.

Observation: when considering the inclination of explosive material, the shape and height of the cone are calculated as shown in the figure.

We are in need for accuracy in placing the package, and directing it towards the target where it should be perpendicular to the target intended to penetrate. The best place is to put it in the tank bottom where it will be directed upward as shown in figure (a). It has to be in the middle of the tank between the two chains, and underneath the tank tower, or slightly to the back, because the tank front has no personnel and has only the engine. To choose the right position to place it, the following have to be taken into accounts:

1. Compulsory passage for the tank or parking place where the package is planted in the routine parking space. The package will be detonated when the tank stops.
2. Speed has to be minimum.
3. The passage is narrow where the tank has to drive over it, and the package is placed in the middle as we indicated. The chain doesn't drive over the package.

Observation: The package circle has to be by a trap, or a remote control.

Testing Bombs

From the safety considerations

When receiving bombs from specious resources, they might be booby-trapped, and there are three possibilities of booby traps:

A. Near the (?) where the blast when installing the igniter.
B. Or when pulling the safety pin.
C. Or when releasing the lever to throw it.

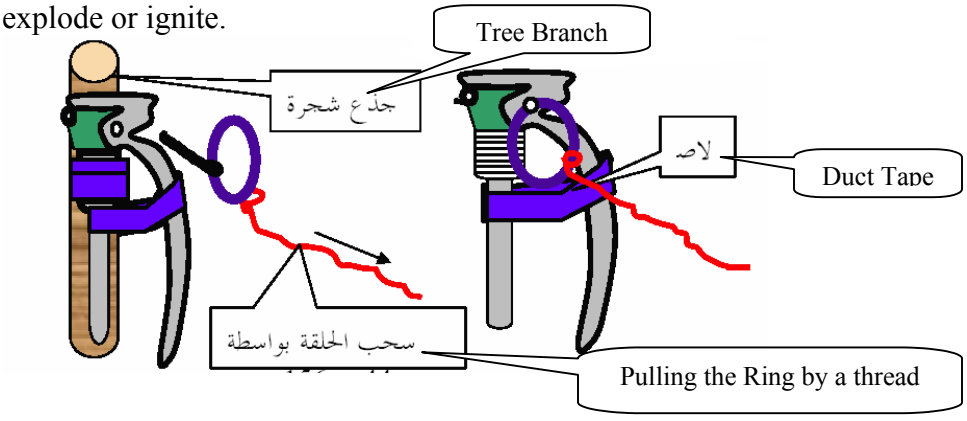
To test the first case, the next steps have to follow:

1. When receiving grenades (bombs) separated from the ignitions, we must measure the depth and diameter of the hole specified for placing the detonator in it, and to make sure it is suitable for the detonator length and thickness, and enters easily (detonator). It could be placed in the bottom a track or screw that work to contain the detonator, and consequently when installing it in its place, it starts friction with the wall in case the diameter is narrow or could compress in case a nail is placed underneath it, and cause a detonator blast during installation. We can benefit from any stick, pen, or pencil if it has the same thickness of detonator. The pen is inserted into the bomb hole and measures the depth, and then compares it with detonator's length.
2. When placing the detonator, the enfold has to be in the detonator where the bombs body is stable because the detonator is light and consequently feel any jam occurs during the enfolding. But if the bomb body does the enfolding, we will not feel if it if there is a jam.

Testing the second case of booby trapping:

Bomb igniter is tested alone without the bomb, so we don't lose if it is booby-trap:

1. First way, this is by pressing the lever. If you feel a resistance in the lever by pressing on it, this means it is safe. If you feel no resistance, this means the pin or trigger, which will hit the capsule, do not hold it. Booby trapping depends on seating the lever from pin or trigger, which will hit the capsule where the safety pin is holding the trigger or the pin. When it is pulled, it will be released, and the bomb will blast (trigger or pin in the normal position are pressed by a spring, fastened to the lever, and the lever is held by a safety pin).
2. We secure the bomb lever with the igniter body by using an adhesive, and fasten the igniter to a tree branch or anything to hold it on with the condition of not being able to explode or ignite.



3. We tie up a strong thread with the ring connected with the nail (pin).
4. We soften the passage of safety pin to ease its pulling.
5. We stay away from the igniter and pull the safety pin from behind a cover.
6. After getting the assurance that the igniter is not a booby trapped, we repeat placing the safety pin in its place, and fasten it as it was before and disassemble the igniter. In the third case where the booby traps is through the pull out the slow cord where the grenade explodes immediately after throwing it in the air, which kills the thrower. In this case, we have to make sure of the slow cord presence. We know if it is booby trapped or not through as follows:
   i. Test the detonator and notice if it has been changed, or looks different from the well-known detonator.
   ii. Disassemble the detonator and check the slow cord. This needs a good experience, and it is recommended to be done by an expert only.
   iii. in case of multiple grenades (bombs), one has to be tested by the igniter without the bomb by placing it in one place, leaving the lever free of movement, and adjusting the safety pin, tying it with thread, standing away from it, and pulling the safety pin by using the thread from behind a cover. When pulling that, the lever will be released on its own. If the igniter explodes immediately, this means it is booby trapped, but if 3.5-6 seconds pass, this means it is acceptable.

Technical Aspect:

When receiving the bomb, we must be assured of the kind of bomb. Is it blasting bomb or chemical one (burn, gas, or smoke)? Also, make sure if it is defensive / offensive kind and the validity of them by doing the following:

1. If the bomb has ignition, it has to be dismantled, and make sure of the detonator presence and explosive are inside it.
2. It needs to be assured that ignitions fit and fastened inside the bombs in case of not receiving the ignitions separately.
3. We have to pay attention to the detonator and not to see white spots if made of aluminum or green spots if made from copper, or to see traces of banging or damage.
4. If the bomb cover is made from a thick polygon metal, it is a defensive bomb, and there are some bombs where the cover is plastic. If the bombs were defensive, the plastic cover is a polygon too and contains balls inside it similar to fragments. But when the cover is a thin metal of soft plastic, the bomb is offensive.
5. We have to be careful for the time delay of bomb (grenade), which is usually from 3.5 to 6 seconds.
6. Be cautious about the impact grenades that have no delaying time.

Testing the Cords (primer, prima cord)

We need to check the cord to assure its kind (burn cord or explosive cord), and to make sure it is in good condition and has not been used, and to make sure of its speed. Is it slow or fast in case of burn cord? This could be done through the following:

1. When trying to ignite the explosive cord, the cover will melt down and the cord does not ignite.
2. Seeing the internal material of the cord. Blasting cord has a white internal material, and it is semi sensitive explosive material in a powder shape. When emptied from the cord burned, it will burn and give a flame similar to gas, and without a smoke.
3. Ignited cord is made from powder of black color to little gray.
4. When igniting the cord and its content, it will burn like back powder and gives smoke.

How to test a slow cord:

1. Cut 20cm of the cord and toss it away because you can't depend on it for testing, because it had been exposed to moisture, and the first thing got moisturize in the cord is the ends.
2. Cut 15cm of the same cord from the other end and burn it.
3. Calculate the time needed for the burn reaching the end of cord.
4. If it is slow cord, it will need about 15 seconds. May be little more or less.

Observation:

1. If the cord burned quickly through one second, this means it is quick, and not good for military use (use only for tricks and booby traps)
2. In case the cord is burned very slowly, does not burn, quenched after burning, or has interruption in flammable; this means it has been exposed to moisture.
3. The cord has to be clean of sharp bending or banging (which cause the partition of black powder)

Testing Detonators:
Testing from booby trapping:

This could be done when detonators are received from suspicious places, and the detonator wires terminals are separated from each other. To avoid any damage, we must do as follows:

1. Don't connect the wires' terminals when you are nearby.
2. Place the detonator in a suitable place away from the other detonators, explosives, or any combustible materials.
3. Hide behind a shield and then connect the detonator terminals.
4. If it does not blast, connect the terminals together, and wrap them with an insulated tape.

Observation: in case the place is very sensitive and you don't want to hear the sound of the detonator in case it was booby-trapped and exploded, you must bring 20 letters empty tank, fill it up with sand and bury the detonator in the middle where the detonator butt is downward.

You can spray some water at the sand to work on absorbing the sound. In this case the sound is very low if the detonator explodes.

Testing detonator from the technical aspect:

1. Check the detonator body, and must be clear of symptoms of moister or damage, has any white spots in the aluminum detonators, or green spots in copper detonators.
2. Assure the detonator is not exposed to bangs or impacts.
3. In electrical detonators, make sure the tungsten wire works by testing it using the Ohm measuring device.
4. Assure the detonator timing.

About testing the explosives:

First: TNT:

- The whiter color in TNT, the newer and purer it is.
- The more brown color in TNT, the older it is and less pure.
- When the TNT mold is sticking together, it reflects its newness and good quality.
- If the TNT mold does easily brittle and breaks, this means it is old and exposed to humidity (moisture).

Regarding the TNT, we take a small piece and burn it. It will give black smoke when burned, and it will melt like plastic and after a complete burn, it will leave a trace similar to the tar.

Second: C4

- If the material of C4 is soft and easy to form similar to gum, it will be good.
- If it is somehow hard and brittle when forming, it is older and has worse quality.
- C4 comes wrapped in green military plastic. The one covered in clear plastic is an imitation, but it is not bad.

Regarding C4; when burned, it will burn and gives pure flame similar to the gas, and you don't see the smoke coming out of it, even in the complete flammability, and does not leave anything after the burning.

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Complete Training Session in Explosive in God's Willing

In the name of Allah, the Most Gracious, Most Merciful and prayers to his honest prophet who was sent for people's mercy (Prophet Mohamed and his pure followers, and who followed their track till the hereafter). (TC: Typical Islamic Greetings)
I start with you this simple session in explosives wishing from God to give you the benefit, and make every Moslem an obstacle in front of the tyrants. We will start by defining explosives, kinds, power, and divisions. Then we will talk about their speed and names of used materials, and wishing from the almighty God the success.

First: Introduction to Explosives

- History did not mention when was the first squib was used, and may be was the popular Greek fires that appeared in Greece in the year 673 Gregorian. It looked like the squibs of fire works, and in the year 1300 AD appeared mixed with charcoal, sulfate, and gunpowder (Potassium Nitrate). This mixture (blend) until many years was the only explosive material, which is known by black gunpowder.
- Europe knew the black gunpowder in 1313 AD, and a thrust (propellant) material for shells was introduced by a German priest. But most likely, the Arabs were the early people who knew and used it in their wars a half century before that. It was mentioned by Ibn Khaldoon (TC: Arabic scientist and scholar in the past) that one Arabic king used it in 1273 AD war.
- Explosives have developed as an energy material to be used for destruction purposes in the second half of 19th century where the Swedish scientist Alfred Nobel was able to make Nitro Glycerin's compound.
- Scientists after that developed the Nitro Glycerin and added it to other materials. They made several compounds completely pure of nitro glycerin. Explosive are used nowadays by all shapes in wars. Some of them are used safely for civilian purposes.

Second: Defining Explosives

They are unstapled chemical compounds that have capabilities of transfer by an outside factor like (impact, heat, flame) into a large amount of gases that have high pressure, and accompanied normally by high temperature, light, flame, and sound.
In order to illustrate the several uses of explosives, we must know their characteristics in term of affected power resulted from it. Explosives are divided into two parts in term of velocity of transformation:

A. Slow Explosives

It is kind of explosives that is transferred during the flammability gradually, and relatively slowly which will give the produced gases a regular pressure that has an increasing thrust speed, and does not explode. Otherwise it loses its major function. It is used to fill up ammunition shells like black gunpowder and Cordite.

Specifications:
1. It can be transferred into gases accompanied by a aloud sound, light, and flame.
2. Burning velocity from zero – 400 meter/sec.
3. It is purpose is to give a thrust power.
4. It is possible to control the speed of transfer by controlling the surface exposed to combustion.
5. It is used in pushing the ammunition and for that reason it is called ammo materials.

C. Fast Explosives

They are explosives that transfer under the influence of an outside factor to explode quickly, and generate high-pressure gases that have huge destruction force.

Specifications:
1. It is transferred into gases very quickly and accompanied with heat, sound, light, and flame.
2. The speed of transformation into explosion is 3000 more than 8500 m/sec.
3. It is important to indicate to the fast explosive material (extremely explosives)

Explosion Speed:

It is the speed that transfers the shockwave inside the particles of the material, and ranges between 3000 to more than 8500 m/sec.

Force of Explosion:

It is the amount of produced gases from a specific sum of extremely explosive material. It is totally dependent on the produced gases volume resulted from combustion.

Severity:

It is the measurement of strength of a highly explosive material to destroy objects. If the produces gasses volume measures the power, the severity is measured by the speed of generating these gases.

Sensitivity:

It is the ability of a highly explosive material under the effects of outside factors, which causes the explosion like heat or impact.

Third: Several Usages of Explosives

Explosives are divided by use into:

1. Shelling materials: used in filling the ammunition shells and they have the thrust property like black gunpowder and cordite.
2. Initiating materials: they are sensitive materials to the outside factors, used in very small amounts with high density. They are used in manufacturing detonators, capsules, and have several kinds:
    a. Flammable initiators – they give a flame when stimulated.
    b. Combustible initiators – they give a shockwave when stimulated.
3. Highly explosive materials: used for military purposes and also used for civilian purposes to demolish buildings, construct roads, open tunnels, mines, and rupture rocks, etc.
4. Mixed materials: they are mixed to produce smoke and heat compounds. They include the heat compounds, signal, flammable, and flare (sparkle),which are used for military purposes and fire works, and in emergencies' situations (TC: SOS).

Fourth: Explosives Used for Civilian Purposes

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- We mean by that the explosives that only used are for civilian purposes, and mostly look like a powder or dough (paste) in order to fill it up in the exploding holes. Normally, their lasting speed does not exceed 5000 m/sec. But the military explosives are applicable for military and civilian purposes. Civilian explosives are used in building roads, opening tunnels, mines' business, breaking rocks, and for under water explosions, etc. The following picture illustrates a building demolished by using civilian explosives. (TC: Picture is not shown)

Fifth: Some Explosive Materials and their Speed of Explosion

Material	Speed of Explosion m/sec
Black Gunpowder	300-400
Neptunium	2500
Ammonium Nitrate	2500-2700
Ammonium Nitrate / Fuel Oil ANFO	3000
Brialiet Barite (?)	3000
Georitt	3000
Amospix	3300
Slurex	3500-4000
Barojell (Pyrogallol) (?)	4500
Mercury Fulminate	4500
Lead Azide	4500
Amatol	4900-4600
T.N.T	6900
Tetryl	7500
Nitro Glycerin	7500-8000
C4	8000
R.D.X	8350

These are the speeds adopted internationally for the mentioned explosives.

Sixth: Explosion Process

Cords and detonators are used to blast explosive packages, and we will explain the kinds of cords and detonators used in explosives:

A. Kinds of Cords
1. Flammable cord (safety cord) that burns in 1cm/sec and it is filled with black gunpowder.
2. Water cords and fast cords.

B. Kinds of Detonators (Explosives):
1. Impact (triggered) detonator
2. Electrical detonator – used with it electrical wires and electrical detonation battery. One kind that detonates in a moment and other kinds have more timing.

Safety distance for personnel is according to blasting operations:

Safety distances for human being in general and according to different amounts of explosives during the detonation is as follow: if the explosive amount is 15 KG, the safety distance will be 32 meters.
The safety distance for 16 to 30 kilograms will be 400 meters. But from 31 to 60 kg, the safety distance will be 500 meters considering the explosive material without fragments. We are only talking about the safety from explosive wave.

Seventh: Materials Considered as explosives

Ammonium nitrate, ammonium nitrate fertilizer, ammonium perchlorate, and ammonium picrate

Trinitro aniline, trinitro benzene chlorate, trinitro benzene (TNP), nitroglycerine and its components

Fulminates of all kinds: Acetone peroxide, hexamine peroxide, Tetryl, and potassium salts

There are many other forbidden materials by the security apparatus that serve the enemy's interest.

Eight: Needed Materials to Make Explosives

1. Grounded sugar and obtained from homes.
2. Potassium nitrate and could be obtained from the agricultural supply store, and usually this material is used as a fertilizer, and sometime is called Chili salt.
3. Agricultural yellow sulfate.
4. Ammonium nitrate.
5. Hexamine (medicinal substance for treating urinary diseases)
6. Oxygen water used for purification and hair coloring. It is available in pharmacies with a concentration of (6% to 9%), but 30% is needed which is available in hospitals.
7. Concentrated sulfuric acid "battery water". To be heated until white vapors appears to complete its concentration.
8. Nitric acid. If was not available, we can prepare it and will talk about that in details.
9. Acetone "women nail polish remover" 60% concentration.
10. Urea. It is an agricultural fertilizer, cheap, and available.
11. Glycerin "skin moisture" available in the pharmacies and used in soaps manufacturing.
12. Ethylene alcohol "alcohol" disinfectant and available in pharmacies. Need 90% concentration.
13. Silver mercury: It is available in thermometers and in dental clinics.
14. Sodium carbonate "food carbonate"
15. Aluminum powder. Powder available under the aluminum saw.
16. Phenol, from the Aspirin tablets if not available.
17. Benzene, burned oil, and solar oil.
18. Grounded charcoal "regular home charcoal from trees and not stones"
19. Sawdust.

Nine: Explosive Preparation

In the name of Allah and under his blessing we start.
Preparing the most important acids used in manufacturing many popular and classical explosives. They are sulfuric and nitric acids. We will discuss how to prepare these two acids in details.

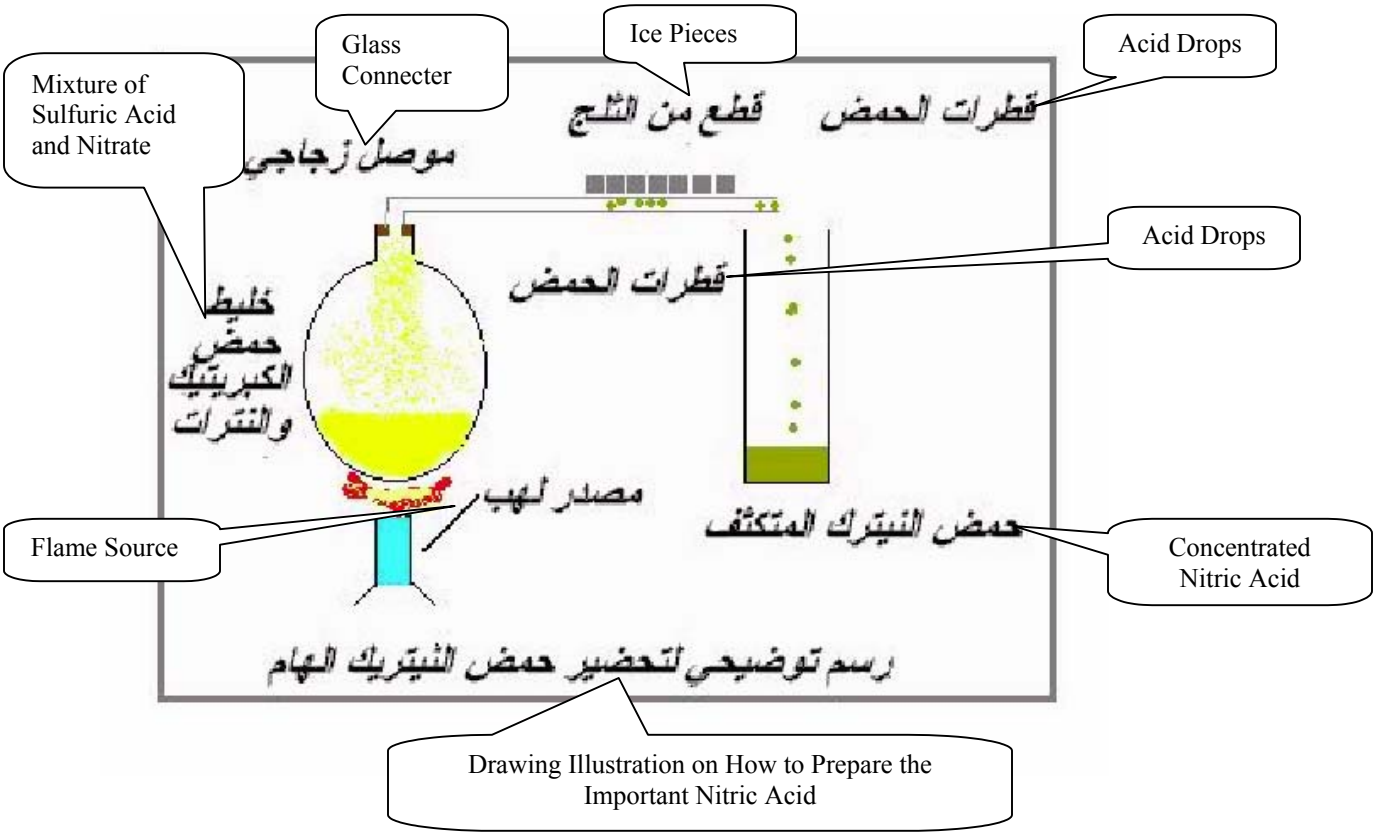
First: Sulfuric Acid:
It is the battery's water and can be bought easily from the battery charging stores, and also available in a lower concentration.
To know its concentration, we do the following:
The density is defined by the weight / volume. Let us say that we have 100 milliliters of sulfuric acid, and we want to know the concentration. We weight 100 milliliter of it, divide it by the volume, and then get the results.
Sulfuric acid with 90% concentration
The density is 1.48 gram/centimeter
We measure according to that.
To increase the concentration, we heat it in an temperature resistance glass container to minimized its volume to about 2/3 after seeing a white vapor, and this concentrate the acid.
To dilute the acid, we add it to water and not vice versa.

Second: Nitric Acid
It is an acid that is hard to get especially in Palestine. For other countries it could be obtained from medical labs, labs' supplier, and schools' labs. It could be prepared in an easy way, but requires patience.

Preparation will be as follow:
1. We take 50 grams of potassium nitrate. It is a cheap agricultural fertilizer and can be obtained easily, and has no suspicion.
2. We bring 40 ml of sulfuric acid of 70% or more concentration, it would not hurt.
3. Two Pyrex containers "heat resistance containers", cork, and rod of glass (looks like straw).

4. An average flame source.
5. Cold water or pieces of ice.

Operation Process
We put the nitrates in the first container, add acid to it, and place the cork on it. We put the container above the fire (flame), and at the other opening of the apparatus, we put the other container “it is no problem if it a regular glass”. We put on the container a piece of ice and we notice yellowish gas evaporating from the heated apparatus. This gas is concentrated and falls as drops, which are the highly concentrated nitric acid. Look at the illustration.



The concentration of sulfuric acid is 90% when its density is 1.84 g/cm^3.

First: Black Powder
Required substances
75 grams: potassium nitrate
15 grams: yellow sulfate.
10 grams: vegetal charcoal.

1. Take 12.5 grams of yellow agricultural sulfate and place it in a plate.
2. Weight 12.5 of grounded vegetal charcoal.

3. Place 75 grams of potassium nitrate and add them to the plate that has the charcoal and sulfate.
4. Blend the mixture (blend) very well until it becomes homogenous.
5. Bring a medium fryer, put little warm water in it, and then add the mixture (blend).
6. Place the fryer on the fire (flame) until you see forming bubbles leaving the mixture (blend).
7. Leave the fryer on the fire for 5 minutes.
8. Bring a filter and put white gauze (muslin) in it.
9. Pour everything in the fryer into the filter through the white gauze (muslin).
10. The black powder will deposit on it.
11. If you notice the powder granulates stick together. Add tap water; pour it again through the filter and gauze (muslin).
12. Take the particles and place them under the sun to dry out after squeezing the cloth to get rid of the largest amount of water.
13. Keep the gunpowder away from heat sources while storing it, and know it does not need a detonator to combust it. It only needs a small blaze to ignite it with colors in the air, and will explode if placed inside a pipe or a retort where it could be sealed.

Second: Explosive Charges
Potassium Permanganate ($KMNO_4$)
Popular names: Permanganore acid, potassium salt, natural Shamilion, Oryx, Kundi crystals.
The color is blue to dark burgundy.
Shape: It looks like the head of needles or granulates like the rough food salt that has violet color, or liquid sold in pharmacies as disinfectant. It is available in veterinarian pharmacies, and used in chicken farms and animals' cleaners. The permanganate is only 5% in the fluid.

Availability: it is sold in pharmacies as animals' sanitization, or wounds cleansing. It is needed to dry the granulated substance and not the liquid one.

Permanganates Preparation Process:
1. Potassium permanganate, 60 grams.
2. Agricultural sulfate (yellow). 20 grams.
3. Aluminum powder, 20 grams.

Each substance is grinded separately and mixed very well. Small portion is taken by using a small spoon, and tested it by ignite it. If the ignition glimmers, it is what we want.

The blasting is done by an ignition by placing it in a metallic contained pot.
Observation: Keep glycerin substance away from permanganate because it will ignite after 20 seconds.
Observation: if this material is used in large quantities (more than 20kg), and we used acetone or fulminate detonators to blast it, it will give us important results but not against armored military targets like tanks. But, it is useful as explosive packages that explode in crowded areas.

Third: Potassium Chlorate $KCLO_3$
It is an extremely white substance looks like a snow, and its granulates are like the soft salt.
How to obtain it? (It can be obtained from schools' labs or from the matchsticks). It is color is red when obtain from matches or black according the color or matchsticks' head.
It is possible to grind the matchstick heads as it is known and common, or by purifying the matchsticks.

The popular way used to obtain potassium chlorate is from matchsticks.

a. We bring a large pot and put 2 letters of water, and boil it until it becomes warm (before the boiling stage).
b. We put a large amount of matchsticks about 300 to 500 sticks, and stir them in several stages until we make sure that the matchstick heads are dissolved completely in water, and we remove the sticks and carefully hide or burn them. We stir the solution after removing the sticks, and add more sticks for several times until the water is filled with chlorates, then we move the pot.
c. We leave the water solution for 15 minutes and we see deposits in the bottom of the pot. We pour the solution into another container through gauze (muslin) with the consideration of not having a leak from the deposit, because the deposit is just pieces of glass, dyes, and glues that need to get rid of after the end of filtration, and we take only the water.
d. We place the container with the solution + Chlorate on the stove until the water starts to evaporate.
e. Caution to avoid complete dryness of water to evade ignition of chlorates (sulfate), and try not to keep a lot of water. The water keeps evaporating until it becomes just a mud deposit. You can control the water dryness using low fire (flame), and without stirring the deposit while drying. The only possible to stir the pot that has the deposit over the fire, lifting the pot from the fire (flame), and drying the deposits that have a soft mud to ease take it out from the pot, and to drying it above a glass board.
f. We put the deposit on a glass board by using a spoon, and keep the deposited to the pot's wall after it dries completely. We can use a sand paper and place the deposits in the sun until they become very dry. We can shake it from time to time while exposed to sun. If there is no sun, we dry it by using the hair dryer.

Observation: normally the chlorates are stuck to the glass board. We use metal scrub to remove them.

g. We grind the deposit using wood or plastic grinder. It is cautionary not to bang (impact) it. But this way produces small amounts only that are good for small packages against personnel and small civilian cars. After grinding, we dry the chlorate another time under the sun to get rid of the moister. We repeat the experiment several times to obtain a large amount of chlorates.
h. After grinding the chlorates, you blend them with the following mixtures:

First Mixture (blend):

1. Potassium Chlorates 3 volumes.
   Soft grinded sugar 1 volume, this 1: 3 percentage in the retort blasted by an ignition
2. Potassium chlorate 70 grams.

15 grams of sugar
12 grams aluminum powder
Stuffed into a retort or pipe, and blasted by ignition or detonator.

Prepare sensitive materials that explode by a simple contact with flame, or by exposure to higher temperature of the surrounding. They are very dangerous and not like the gunpowder, permanganates, or other previous discussed materials. Who ever is going to do the preparation must abide by the instructions word by word without any kinds of adventures.

Manufacturing Acetone Peroxide

This substance is very dangerous and its explosion speed is 4000 m/sec.
It is advisable that this material to be prepared by experienced people only. It is a sensitive material and killed many of its manufacturers. We ask who is going to prepare this material to have an expert next to him, or to follow the instructions exactly. I want to mention something very important, and not to bring any substance home. Make a special place for this purpose, and it is recommended the place to be well ventilated.

To manufacture any explosive materials, there are general rules that must be understood.

General Safety Procedures:
First: First mistake is the last one.
Second: conduct the work in a well-ventilated place, or outside with the presence of an exhaust fan.
Third: Provide plenty of water, and it is recommended to have a water faucet in the work place because water is a good solvent to most explosive materials and acids, and sometimes it stops the reaction.
Fourth: Don’t prepare the whole amount in one time especially when you use the ingredient for the first time, and prepare to make large quantities.
Fifth: Putt away any heat sources while making and drying the material.
Sixth: Don’t keep the dry material for a long period of time, because it is sensitive towards banging and heat. Also, the moisture negatively affects it. It is recommend to cover it by water, and to cover the container, because the water will dry with time.
Seventh: conducting the experiment by a person who has a scientific or academic experience, or who has already made this kind of material more than once.
Eighth: Provide first aid materials (gauze, burn ointment, headache medicine, extinguisher, and bag of sand)
Ninth: Containers must be washed and dried before any use.
Notice: Before doing any work, you must do the following:

1. List the needed tools to do the work.
2. List the needed materials (substances) to make the mixture (blend).
3. List steps and number them.
4. Read the experiment more than one time, understand it very well, and know all details.
5. Every previous step you do needs to be marked with a sign and by using a light color.

6. All tools and material need to be available before starting the work.
7. Follow the instructions and steps word by word, and don't move to other steps unless you are completely done with the previous one.

Needed Tools:

1. A notebook to write observation on it.
2. 2 (300-600 ml) marked glass containers.
3. 1 (100 ml) marked container.
4. Thermometer.
5. Glass straw.
6. Filter papers.
7. Large container.

Needed Materials:

1. Sulfuric acid (H_2SO_4) with an acceptable concentration. It is used in filling up the cars' batteries. To increase the concentration, we boil it a little until we see white vapors.
2. Oxygen water H_2O_2, which is used as a disinfectant, and also used for coloring the hair. It is available in pharmacies and women hairdresser stores.
3. Acetone that is used as a nail polish remover. It is available in pharmacies and hairdressing salons. It is available in the industrial area of Rammallah within the security rules (indirectly).
4. Ice, salt, and water.

Observation: when buying large amounts of the needed materials, use a good cover, disguise, and fake names.

The percentage of used substance (by volume and not by weight):

Oxygen water: 1

Acetone: 1

Acid: (2.5-5%) of the total mixture (blend).

Work Process:

1. Mix 50ml of acetone with 50ml of oxygen water in a glass container, and stir them carefully (it is not important which one is poured first).
2. The resulted mixture (blend) is cooled by putting the container in a larger container that contains ice and salt with a little water where it keeps the temperature under 15 degrees Celsius, which is preferred, and must not exceed 50^{o} Celsius. If there is a problem that causes the increase of temperature, you can add cold water to the mixture.

Observation: because the internal container is light, we have to secure it, and to make sure it is stable inside the larger container on the side, and not in the center (to avoid flipping inside the larger container).

3. Add in the beginning 2.5% of the total mixture (sulfuric acid) gradually with stirring and paying attention to the thermometer where we have to keep it at 15^{o} Celsius as much as possible. If increased a little, we need to wait a little bit then stir to cool it down and so on. We add the sulfuric acid, you need put drops gradually away from your face and it preferred to have glass cover above the danger area. Adding the acid gradually to avoid scattering the acid when it is in high concentration.

Observation: If the acid concentration is very high and causes some scatterings during the mixing. We work on diluting the concentration by pouring the acid on water (and not vice versa) with 1:1 percentage with stirring.

4. Leave the resulted mixture for 9-12 hours to deposit a white material that looks like a snow (above the Acetone Peroxide).
5. We filter the deposit from water (we don't need the resulted water when washing or filtering), and then we wash it by cold water through putting water filter on a container, and pouring the deposit until it is completely filtered. Then we add the cold water more than once until the taste of acid is gone completely from the resulted water. (You know that by putting a sunflower paper, or by putting a drop of water on the tip of your finger and tasting it after washing the deposit at least three times. (we keep washing it until the acid taste is removed).
6. For the large amounts, you can use any cotton cloth to wash the deposit by putting the deposit inside it and tie it up to the water faucet, and pouring water on it until we get rid of the acetic. We make sure of the acid removed by following the previous step.
7. We dilute the deposit by spreading it before it dries and forming small chunks in order to easily wok with it.

Observation: when spreading the material, you must adhere to the following rules:

- Use a wood spoon where the front is directed towards the material, but is should be directed to the side (lateral).
- The hand spreading the substance has to be far where the arm should not be above the substance, but you can go to the other direction, or turn the material to your side.
- Keep the face away.
- The substance at this status is very sensitive to ignition and also reasonably sensitive to hitting (banging). This makes the materials ready for use after dryness (ready for blasting by using any ignition, impact, or adding acid to it).

Observation: It is recommended to fill the substance in plastic bags to avoid scattering of falling on the edges of containers, and to make sure none of the material fell on the ground; otherwise you need to remove it by wiping it out with a wet cloth.

- At the sixth step and after that step, we make sure that only one person is conducting the work.
- It is preferred to use the material directly within one or two days and has to be away from any heat sources.

Observation: You can use plastic containers during preparation when you are preparing large quantities. You can use a large measuring cup or bucket.

General Rules:

1. Wear during the preparation a loose white dress (it is preferred to use safety eye glasses especially when pouring the acid to the mixture or water), and need a nose mask (TC: respirator).
2. Be very careful and don't place your face near the container that has the reaction.
3. Don't taste the materials involved in the reaction.
4. Be very careful when dealing with chemical substances, and don't breathe in general any chemical vapors. If you have to that when dealing with simple cases, you can move the produced air by hand, and breathe gently away from the area.
5. Wear gloves during the preparation because the oxygen water used for hair coloring might causes a slight burn to your skin, converts the color to white, and will take a while to disappear. This is a criminal indication.
6. If you feel dizzy, go out and breathe fresh air and wash your face with water.

7. It is recommended the drink coffee during the preparing in a closed place, and especially if you are preparing large amounts.
8. If you feel of vomiting, you can drink cold milk in this case.
9. When preparing large quantities, the mixture volume should not exceed 14 letters for each one. This is of course after making experiment on the main ingredient by using small amounts (100 ml mixture).
10. If any of these chemicals touches your face, hands, or your clothes, use plenty of cold water immediately.

Calculating the Deposit Amount:

- To avoid making larger or lesser quantity than needed, you need do a simple calculation to determine the needed amount to extract the deposit (explosive substance).
- 100ml of the mixture (50ml acetone + 50 ml oxygen water) gives in its ideal case 25 grams of explosive material (white snow).
- In other way:

Every 100ml of mixture gives 25 grams of white snow (explosive material)
Assume we need to prepare ½ kilogram (500 grams) of explosive material. What is the volume of the mixture (blend)?
Solution: We can say 100ml of mixture (blend) gives 25 grams and X gives 500 grams.
X = 500 x 100/25 =50000 / 25 = 2000 ml of mixture (blend).
This means 1000ml (1 letter) of acetone and 1000ml (1 letter) of oxygen water.
In the contingency time, we calculate that for every 100ml of mixture, gives 15 grams of deposit, and to void shortage, we can say:
100ml of mixture (blend) gives 15 grams
X gives 500 grams
X = 100 x 500 / 15 = 3333 ml approximately = 3.3 letters mixed.
➔1666 ml (1.6 letters) acetone
And 1666 ml (1.6 letter) oxygen water
Another example: What is the required amount of the main ingredient to make 3KG of white snow (explosive material)?
Solution: 100 ml of mixture gives 15 grams of white snow.
X = 100 x 2000/15 = 1333 ml of mixture (blend) = 13.3 letters
➔ 6666 ml (6.6 letters) of acetone and 6666 ml (1.6 letters) of oxygen water (approximately).
To calculate the amount of acid needed, we follow the same procedures with the knowledge of the amount of acid needed is 2.5% of the mixture volume. This means every 100 ml needs 2.5 ml of acid.

Example: Calculate the amount of needed acid to prepare 13333 ml of the mixture?
Solution: 100 ml of mixture needs 2.5 of sulfuric acid H_2SO_4
13333 needs X
X = 13333 x 2.5 /100 = 333 ml of acid (approximately)

The concentration of sulfuric acid needed is 70%
The concentration of oxygen water is 30%
The concentration of acetone is 70%.

Preparing Mercury Fulminate
Need:
1.5 grams of Mercury
11 ml of nitric acid with a 60% concentration or more
13 ml concentrated ethylene alcohol (medical alcohol)
Process of Preparation

1. Put 1.5 grams of mercury in a glass container then add 11ml of nitric acid to it. Leave it until it reacts and dissolves the mercury in the acid, and makes mercury liquid that has a green olive color.
2. Put in another container (glass) 13 ml of alcohol (white alcohol), and then add the mercury solution to the alcohol, and not the opposite to avoid evaporation (scatterings)
3. Leave the mixture for a while to complete the reaction. If the weather is kind of cold and the reaction is slow, we heat the solution of low fire or in the middle of hot water bath to activate the reaction, and keep it away from heat sources in the beginning of reaction.
4. During the reaction, a yellow flammable smoke appears, avoid inhaling that, because it is toxic.
5. Leave the solution until the completion of reaction. You will see the deposit of gray substance that has the shape of shiny needles. It is the mercury fulminate.
6. Bring a cone that has a white cloth or paper filter, which is better because the fulminate is very soft and part of it might leak if you use the cloth. Pour the solvent into the cone. The deposit will stay in the paper. Then we wash the deposit (fulminate) by water until the traces of acid disappear. The better way to wash the fulminate from blemishes is to bring a glass container, put the fulminate in it and immerse it in water, and leave it for two days or more. When needed we remove the fulminate from water and dry it to become available for use.
7. Take the deposit and leave it until dry in the room temperature, and away from any heat sources.

Safety Precautions

- Nitric acid causes infection in the skin if it fell on it. Immediately pour cold water on the place contacted by acid.
- Yellow smokes are toxic and avoid inhaling that. Use medical mask to avoid inhaling these gases.
- If you add alcohol to the solvent, the mixture will evaporate in the air. You must pour the solvent to the alcohol and not the opposite.
- If the temperature rises during the reaction in the last stage and the yellow smoke ignites, cover gently by using and paperboard, or any solid body to prevent the oxygen from getting into it. Don't be scared of combustion during the preparation.
- Be patient, concentrate, and don't rush during the preparation process.
- Don't keep the fulminate in a copper container. Put it in a bottle and add water to it to cover it. When you need to use take it out and dry it. Store all the sensitive materials in bottles filled with water. Pure water purifies the sensitive material and prevents it from explosion if exposed to heat sources.

Preparing Hexamine Peroxide

Definition of Hexamine: it is a medicine that cures urinal illnesses.
Scientific name: Hexametlylene + tetrauene or Trubeuene
The equation:
14 grams Hexamine, 3 ml of sulfuric acid, and 45ml of oxygen (TC: missed the water)
Hexamine peroxide is classified as an activator and a catalyst substance with the sensitive material. This is also used as an initiator in explosive detonators of classical materials like TNT.

Preparation Process

1. Put 45 ml of oxygen water in a glass container.
2. Put the oxygen water container in a pot that has ice and salt (ice bath).
3. Add 14 grams of hexamine gently in different portions and stir. The temperature should not exceed 10^{o} Celsius and if increased, stop adding the hexamine.
4. Stir the mixture until the hexamine dissolves the oxygen water, and make sure the temperature does not to exceed 10^{o} Celsius.
5. Add the sulfuric acid one-drop at a time by using a syringe or an eye- dropper (pipette), or any other glass container. It is important to control to dropping process with the temperature should not exceed 10^{o} Celsius.
6. Leave the mixture for a period 12-24 hours.
7. You will see a white deposit in the container.
8. Take the deposit and filter it. Keep the deposit that is particles of hexamine peroxide.
9. Take it and dry in a ventilated area away from the sun.
    - We advice by taking a sample using matchstick and burning it to test the substance.
    - This substance has to be stored in a container that has water. When used, it will be filtered, dried, and becomes ready. The substance is very dangerous and is not an easy one. Please deal with it in extreme cautious and don't underestimate it.

Combustible Oils

Combustible oils are very, very, very dangerous.
The most dangerous one is nitroglycerin, which explodes by shaking, and has a very high blasting speed that reaches 7000 m/sec. We reduce its sensitivity by a mixture to make dynamite. We will discuss different kinds of dynamites.

Combustible oils are considered very important materials, and classified among the explosives because of their high sensitivity, and their destructive capability. Some of these oils are: nitroglycerin, nitro glycol, nitro methane, and nitro benzene.

Nitroglycerin

The equation for preparing nitroglycerin:
15 ml of concentrated nitric acid (above 92%)
22.5 ml of concentrated sulfuric acid (from 90 to 100%)
6.5 ml glycerin + 200 ml of very cold water

Preparation Process

1. Put in a glass container 22.5ml of sulfuric acid in a middle of ice container (ice bath)
2. Add the nitric acid in portions and don't exceed the 30^{o} Celsius.
3. After you finish adding the nitric acid, leave the acid mixture to cool off to five degrees in the middle of the ice container (ice bath).
4. Take 6.5 of glycerin by using a dropper or syringe (make sure the needle is taken off), or use glass cup where you can put the solvent, and add the glycerin drop by drop and very slowly. Don't exceed the 10^{o} Celsius temperature.
   Observation: If the temperature increased to15 degrees, the solvent becomes dangerous, and you need to pour the acid into the ice immediately.
5. After you finish adding the glycerin, add 200ml of very cold water in one time. You will see the deposit of a colorless oily layer in the bottom of the container. It is the nitroglycerin oil.
6. Bring a large syringe that has thin plastic pipe in its top, and suck the water out. You will have an oily deposit.
7. Wash it with water carefully. You can wash it by using carbonates to make sure it has no acid.
8. Take 100ml of water and add 5% of sodium carbonates, and wash the oil separate times. 3 to 4 times to reduce the traces of acids. This makes the nitro glycerin ready for detonation. Washing is done by pouring the water mixed with sodium carbonates into oil in a glass container for several times, where the water is sucked out each time, and the oil deposit is in the bottom. Then you repeat the same process again.
9. It will be stored in a pipe and you add water to it.

Nitroglycerin is a strong combustible liquid and explodes by using a detonator. It could be mixed with other materials like medical cotton to transfer from liquid to non-liquid substance especially if we wanted to mix it with nitro cellulose that makes it better.

Nitro Methanol

Preparing the Nitro Methanol Oil
The equation:
16.5 of nitric acid
25 of sulfuric acid
15ml of methanol

Preparation Process

1. Add the nitric acid to sulfuric acid in the same way from previous experiment. (Page 24)
2. Cool off the mixture to five degrees.
3. Take by a dropper or glass straw 16ml of methanol, add the methanol to the two acids quietly, and make sure the temperature does not exceed 10 degrees. If the temperature reaches 13 degrees, pour the container into the ice, because it becomes very dangerous. (Stir for one minute after you finish from adding the methanol, and make sure the temperature does not exceed 10 degrees Celsius).

4. After stirring, take 250ml of cold water and pour it to the container. We will see an oily layer formed in the bottom of the container.
5. Suck the water out in the same previous way. The deposit is nitro methanol oil will remain.
6. Wash with water + 3% carbonate. If you don't use the carbonate, washing by water is sufficient, but carbonate purifies the blemishes better.
7. Store it in a container that has water in it.
   Observation: when you notice the temperature increase though the monitoring of the thermometer, and you could not control it, pour the acid content into the ice, and try the process again quietly and without rush.

Nitro Glycol
Preparing Nitro Glycol
It is a strong combustible material. It is stronger than TNT, very important, and is not dangerous to store, because it does not explode when exposed to heat. It is safe to transport, very effective, and very powerful specifically in cutting hard materials. It could be mixed with nitro cellulose (treated cotton with nitric and sulfuric acids).
Important observation: It blasts by using a nitro glycol detonator.
Preparing Nitro Glycol
The Equation
15ml of nitric acid
22.5ml of sulfuric acid
9.5ml of glycol
150ml of very cold water

Defining Glycol: it is a liquid substance sold in medical preparation labs, and can be obtained in containers that are sold in the cold areas (anti freeze), which is used in cars' radiator to prevent water from freezing inside the radiator.
To obtain the glycol from the antifreeze liquid that has blue color or olive green in some countries. We buy the antifreeze container and pour its content in stainless steel pot. We put the pot over a low fire and leave it to boil, and reduced to half the quantity. After that we lift the pot and leave it to cool off. This makes the glycol material ready for use in the previous equation.
Preparation Process
1. We add the nitric acid to the sulfuric acid in similar way to the previous experiment.
2. We cool down the solvent to five degrees.
3. We add the glycol drop by drop and quietly, and make sure the temperature does not exceed 10 degrees.
4. After completing the addition of glycol, stir for five minutes, and insure the temperature does not go above 10 degrees Celsius.
5. After we finish pouring the glycol, we pour 150ml of cold water over the experiments. We see an oily layer formed which is the nitro glycol.
6. We separate the water from the oil by sucking it out (by using a syringe) that has a thin hose similar to the previous nitro cellulose experiment. This means washing the oil several times. The result: nitro glycol oil, which is highly combustible, explodes by a detonator and possible to mix up with cottons, sawdust, or nitro cellulose.

Observation: This oil explodes with or without control similar to T.N.T.

Important observation: We might not see the amount of oil from the experiment unless we use small equations, and we must know that this small amount is not to be under estimated, and the same experiments to be repeated to obtain the largest amount of this dangerous oil.
These were the combustible oils, which are the most dangerous ones.

Continuation to Combustible Oils

If a boiling appears in the solvent during the addition of glycerin, glycol, or methanol, this means the solvent is very dangerous and about to blast. You have to pour the solvent onto the ice immediately, and repeat the process slowly and without rushing.

Observation: to store oils, we put them in a container and then add water.

1) Making Dynamite:
   1. Nitroglycerin oil 75%
   2. Basement sand, which is very rich in potassium nitrate 25%

   Mixed together and blasting by a detonator
2) Nitroglycerin 90 to 93%
   Nitro cellulose 7% to 10%
   Blasted by a detonator

3) Nitroglycerin 62%
   Nitro cellulose 3%
   Sodium nitrate 27% (blasted by a detonator)
   Sawdust 8%

4) Ammonium nitrate 70%
   Nitro glycerin 30% (detonator)
   Grind the nitrate and make it very soft. Then add it to the nitroglycerin, and stir until it becomes like a paste (dough). This produces safety dynamite.
   1. Nitro glycol + medical cotton as needed.
   2. Nitro methanol + medical cotton as needed.
   3. Nitroglycerin + medical cotton as needed.

Preparing Nitro Cellulose and Cotton Powder

Nitro Cellulose: Cotton powder.
The Equation:
Nitric acid 15ml
Sulfuric acid 25ml
Medical cotton as needed
100ml water + 5 grams of sodium carbonate

Process:

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1. Add the nitric acid to the sulfuric acid drop by drop, and make sure the temperature does not go higher than 30 degrees Celsius in the middle of a cold bath (Ice + Salt).
2. Take little amount of pure medical cotton proportional with the acid, and add it to both acids until it absorbs all the acid solvent.
3. Wear rubber gloves, take out the cotton, and wash it under the faucet by running water to minimize the effect of acid.
4. Take 100ml of water and add 5 grams of sodium carbonate to it.
5. Place the cotton in the middle of water + carbonate, put the container over a heat sources, and make it boil for five minutes.
6. Take the cotton, wash it again with water, and let it dry under the sun.
7. Take a small sample of cotton after dryness and ignite it to make sure of the ignition capability of the gunpowder.
8. This gunpowder is controlled and detonated by acid flame, and you can benefit from it after lifting the cotton to repeat the experiment (making cotton powder).
9. Observation: the experiment ends at step number 3 in washing the cotton under the water, but to obtain pure cotton powder of any acid, you can follow steps number 4 and 5.

I ask God the success for you and me. I thank our brother Abu Saqr and the dearest brother AlJamalyn for the valuable information. Please ask them if you have any questions. They are the best in the field. I say good-bye to you and put you in the safe hands of God. This is all what I have about this training session, and May Allah blesses us the benefit and his worship. I ask for your prayers.

Abu Mos'sallam

In the Name of Allah, Most Gracious, Most Merciful

Because of the danger of this issue, I wanted to warn you about storing explosives at your home, and what might cause in term of human and economical damages.
For those innovative brothers who excelled in the jihad work, and in making explosives, I ask them to continue in their innovation, and to find a suitable way to store explosives away from homes or residential areas, especially the summer is approaching us, and the temperature is high in addition to the weather is hot.

The explosive materials must be stored considering the level of danger, their capabilities for self-ignition, and the affect of the outside environment (temperature and moisture). You can store each group in a separate storage as follows:

a) Highly sensitive material like: mercury fulminate, lead azide, lead styphnate, tetrazene, and other parts included in make these substances like detonators (explosive capsules).
b) Nitroglycerin materials like: jijanite, gelatin dynamite, and nitroglycerine dynamite.
c) Highly explosive materials like: TNT, hexogen, amatol, tetryl, barogell, and ANFO with the detonating cord (primer).
d) Pyrotechnics materials like: flammable materials, smoke initiators, and black gunpowder.

Also, you can't store the explosive materials in the same storage of detonators, capsules, or hand grenades. Detonators have to be taken off during the storage. Don't use any kind of ferrous (iron) with explosive. This might cause a spark that will detonate the explosive material.

Finally, I hope you take this issue very seriously and let us learn from other people mistakes and get the benefit.

I ask Allah to give you success.

First Session: Fundamentals of Explosive Science

The scientific known principle says: the energy does not disappear, and does not revive from nothing. But it does transfer from one shape to another. Most of the natural materials contain a huge latent energy. If this energy released or converted suddenly to another kind, it will make wonders, and some of these natural materials are explosives, which are converted from one kind to another suddenly that are known by the explosion.

Explosion occurs when the latent or stored energy inside the material is suddenly released to affect the surrounding, and making a loud sound. A simple example about that is the balloon in a child hand, and a complex example is the detonation of nuclear bombs. This latent energy is controllable, and could be used for industries, demolition, fire extinguishing, strengthening metals, welding, and others.

Explosion is a sudden shift of the energy. But the opposite is not correct. Not every sudden movement of energy causes an explosion similar to the gas pipes used for cooking in the kitchen. For this reason, the definition of an explosive material is described as follows:

1. High energy to produce a gas under high-pressure conditions.
2. High energy to produce a gas that has a high speed that affects the surrounding environment, and exposes it to a strong and effective dynamic stress.

According to that, explosives can be classified into three categories:

1. Propellant explosives like the gunpowder.
2. Strong explosive like TNT.
3. Activated and initiated materials like mercury fulminate and called by detonators.

Explosives are divided into two kinds:

1. Explosives affected by a temperature.
2. Explosives affected by a detonation and impact, and not by temperature.

Flickering (glimmer) and resounding ignitions:

We know that the explosion is an energy conversion from one shape to another within a short time. Consequently, it is a chemical reaction and it is possible to change the speed of this reaction by changing the conditions of the chemical reaction especially by changing the temperature, or by adding suitable catalysts, or by increasing the concentration of the used substances forming the explosive. Since we can increase the speed to any imaginable number, the conversion speed divides the explosion into glimmer ignition or resounding ignition, and the first one is relatively lower than the second. Flickering ignition is relatively a slow procedure. For example, if you blend two kinds of gunpowder and ignite them, the velocity of one kind will extinguish the other one before complete ignition, especially if the experiment is conducted in an open area (free air). In the resounding ignition, every items of all materials converts within a short time about 1/7000 of a second into a gas status.

Factors Affecting the Explosion:

1. The affect of oxygen: It is not assured of the oxygen presence, because most of the explosive reactions are considered reversed oxidation reactions. The percentage of oxygen included in the nuclear mix of a chemical explosive has little importance. It is suitable in this case to distinguish between the whole oxygen. This means nothing, and the effective oxygen is inside the material itself.
2. The percentage of the mix components: The amount component of mixed explosives is highly effective in the speed of reaction, and consequently the speed of explosion. They are kept percentages that differ from one material to another and must be taken into account.
3. Temperature and pressure: The speed of burning is increased with the increase of pressure and temperature. It is almost doubled when the temperature increases 10^{o} Celsius. The pressure increases the temperature, and the more increase in pressure causes more increase in the reaction speed, where the flickering ignition might convert into a resounding ignition.
4. Explosive density: The absolute density or the true density of the material affects the speed of burning. Weight density affects the flame (externally) and therefore, there is a limit for the feasible density of every explosive to have a resounding explosion. This means, if the explosive density increases above the upper limit, it will be difficult or impossible to detonate it.
5. Inhibitor (Control): This name is used on the obstacle. For example, the black powder ignites normally in an open-air environment and flicker ignites inside the mortar barrel, and has a resound blast when used as an internal charge for shells. All explosives don't need the same control while the gunpowder needs to damage the air in it while the nitroglycerine requires using a piece of paper to cover it before banging or igniting it.
6. Catalysts: They are materials that affect the speed of reactions whether by increasing or decreasing them. The first one is called a positive catalyst, and the second one is called a negative catalyst. For example, in the charcoal mines, the iodine plays a negative role in gas explosive mixtures (Methane + air). It is sprayed in the mines to prevent explosion.

Kinds of Explosions:

1. Mechanical Explosion: It is resulted from the rise of pressure in a narrow area.
2. Chemical Explosion: It is the conversion of the material into gases within a short time, and making volumes that reach to 10000 – 15000 double the original volume of the same material before detonation.
3. Nuclear Explosion: It is the splitting or mixing the nucleus (kernel) inside the explosive material. It is accompanied by a high temperature and huge amounts of gases.

In the next session: The effect of explosion, explosive classification and characteristics.

Second Session: The Effect of Explosions. Explosive Classification and Characteristics

Second Session: The effect of explosives, their classifications, and characteristics.

Effects of Explosion: during the blast of explosive, it converts very quickly into a large amount of gases, which causes some primary and secondary effects.

The primary effects of an explosion:

1. Pressure: when $1m^3$ of explosive blasts, it produces 10000-15000m^3 of gases within 1/7000 second and speed of 100000 KM/h. It also generates 108.5 ton/cm of pressure. This pressure destroys anything whithin its range and has negative and positive phases. The positive phase is created by the first shockwave during the explosion and destroys the objects within its perimeter. At the end of the wave and as a result of reaction, the air returns to fill up the vacuum caused by the wave, and affect negatively on the objects within the perimeter from the other reversed direction of the wave.
2. Destruction Effect: When the buried explosive charge under ground or under water detonates, it produces the same amount of gases. While the earth and water are hard to press, the blast will be less violence, but the destruction capability will be the same. The destruction effect is larger and can be compared to an earthquake.
3. Heat Effect: It differs according to the explosive material, where the slow explosive takes more time to burn, and the fast material takes less time and has a higher blasting temperature, but their time is very short. In general, the heat affect is the weakest effect of explosives.

The secondary effects of an explosion:

1. Reflection: The shockwave reflects similar to the light and sound. Its speed and effect decreases for every reflection until it disappears. For this reason, trenches are built in circular crocked shapes.
2. Burning: Resulted form the generated heat of explosion, but it needs flammable materials to make the fire.
3. Fragmentation: It is the fast movement of fragments from carrying the explosive body in a speed that reaches 8000 m/s, and in straight line. Half of the blasting energy is used in tearing the carrier of explosive. If we make grooves in the body, this will lead to forming fragments similar in size of the intersected grooves. If the explosive has a strong blast, the fragments will be sharp and thin. If the explosive has a slow blast, the fragments will be big and blunt.

Explosives Classification:

- According to their presence.
- According to their use.

- According to their speed.

First: According to their presence
1. It is a liquid explosives like nitroglycerine, which is a yellow oily liquid, freezes in winter, very sensitive, dangerous to work with, and kept under 8^{o} Celsius bellow zero.
2. Paste (dough) explosives like dynamite and geljanite (?).
3. Solid explosive like TNT, ammonal, and RDX.
4. Gas explosives like methane and hexogen.

Second: According to their use
1. Inducing Explosives: To cause other materials to explode. It is distinguished of being very sensitive against banging, friction, and heat. But, it is has a weak affect on targets, and used in making detonators to initiate the explosion.
2. Cutting Explosives: They have the capability to destroy and demolish objects. They have three sections, high effect, medium effect, and low effect. The highly effective material is used to install detonating cords as major charges. The medium effective material is used for the major charges, and it is mostly used like the TNT, dynamite, and geljanite (C3 and C4). The low effective material like the ammonium salts is used for making the nitric fertilizer, and reacts with TNT to make very sensitive materials. The nitric fertilizer (urea fertilizer) in 33% concentration can be used as a blasting material after mixing it with solar oil or diesoline, and has to be wrapped by moisture resistant material for several hours. This mixture is called ANFO.
3. Propellant Explosives: These materials have the blasting conversion in a quick flammability. They are two kinds, the black powder, and nonsmoking gunpowder.
4. Heat Explosive (high temperature): They are the burning ones and can be done by adding aluminum powder or magnesium to the explosives.

Third: According to their speed
1. Slow explosives: Their speed doesn't exceed 100m/s like the black gunpowder that has a speed of 400m/s. These explosives are used as propellants and are easy to ignite by using a flame.
2. Fast explosives: These kinds are designed for destruction and demolition. Their speed of explosion exceeds 1000 m/s, and might reach 8400 m/s in RDX. These explosives need an initial impact to detonate.

In the next session: Knowing the explosives

Third Session: Knowing the Explosives

In the Name of Allah, Most Gracious, Most Merciful
Third session: Knowing the Explosives
Before I start, I thank the brothers who requested to insert pictures with the information as much as possible. I will try to include illustrations or pictures in the manufacturing process.

First: Major Components

1. Mercury Fulminate: One of the mercury salts that has a white color and softy touch. It looks like very small needles and highly poisonous like the rest of mercury salts. It explodes when the temperature reaches 180^{o} Celsius and detonates violently if it touches other burned object, panged, or rubbed. The larger crystals are more sensitive than the smaller ones. Its explosion speed is 5000 m/s. It dissolves in acetone. It doesn't dissolve in cold water. If to cold water is added, this will reduce its danger while in use. It reacts with aluminum to produce a non-explosive material. For this reason, it is never stored inside an aluminum container. It is always stored in copper, glass, or plastic pipes. It can be damaged or discarded by immersing it in a concentrated solvent of sodium and copper sulfate.
2. Silver Fulminate: One of the silver salts. It has the shape of bright needles and it is more sensitive than mercury fulminate, and more expensive. For this reason, it is rarely used and in a very small amount to avoid dangers. Its explosion speed is 1000 m/s.
3. Lead Azide: It a crystal white object that does not dissolve in cold water and dissolves slowly in boiling water. It sensitivity changes according to the size change of crystals similar to the mercury fulminate. It reacts with copper to make an explosive sensitive material. Therefore, it is never stored in a copper container to the opposite of mercury fulminate, and should be stored in aluminum, glass, or plastics pipes. Moisture doesn't affect it at all. Its speed of explosion is 5300 m/s. When exposed to light, its color changes to gray and explodes spontaneously if exposed to sun of ultra violet ray. Immersing it in a concentrated solvent through sodium or aluminum acetic will spoil it.
4. Lead Styphnate: Small crystals that have a dark orange color. It does not dissolve in water and has an explosion speed of 5100 m/s. It dissolves in acetone and used with potassium chlorates in shock pipes.

Second: Cutting Explosives
They are the explosives used for blowing up, destruction, and sabotage.

1. Trinitrotoluene (TNT): Highly used as a military explosive because of its good quality, strength, and easy to store and carry. It is density is 1.54 and might reach to 1.64 by pressure during the melting. It melts at 82^{o} Celsius. It can melt and cast in molds according to the need. It burns in an open air without causing a flame, and leaving a dark smoke. The pure one has a white color, and the commercial one has a yellow sand color. Its speed of explosion reaches 7000 m/s.

Its color changes to brown when exposed to the sun and that affects its strength. It doesn't dissolve in water and does not get affected by metals. It is consider a measuring unit to other explosives.

2. Nitroglycerine: It is an oily liquid that has light yellow color, and assumed to be colorless in lab purity situation. Its density is 1.59 and it doesn't dissolve in water. It dissolves in all organic compounds (chloroform, benzene, olive oil, acetone, ether, phenol, etc.). It freezes at 8^{o} Celsius and melts at 11^{o} Celsius, and has 8000 m/s speed of explosion. The sun affects it badly. It is very dangerous and might explode by shaking or exposure to normal temperature. It is stored in cold and many restraints can be added like wood sawdust and flour to reduce its sensitivity. It can be disposed by immersing it in a concentrated sodium solvent.
3. Dynamite: There are three kinds of dynamite. The available one now is one kind that contains nitroglycerine and nitrocellulose, ammonium nitrate, and constraints in different percentages. It has many commercial names and it is soft, yellow, dough like material that could be shaped and cut by hand only. Do not use any sharp tool to cut it. Its speed of explosion is 7500 m/s after 45 days of manufacturing. If stored for a long time, nitroglycerine starts to separate from the mixture, and becomes very dangerous and can notice that by seeing oily spots on the cover or on the surface. In this case, it must be disposed immediately.
    - ♦ It could be disposed as follows: sand and filter dusts are spread in a flat shape in the same direction of wind, and in the open air and isolated area. The dynamite is placed after unwrapping it very carefully sticking to sand base, and is ignited through a slow cord after the withdrawal of everybody to a safe place. If the wind direction doesn't change, it will burn normally. But, if the wind direction changes, or becomes stagnant, the rise of flame temperature above it will cause a resound explosion. Therefore, a complete caution has to be taken.
4. Soft Plastic Explosives (Paste or Dough): They were manufactured to substitute the dynamite. They have the capabilities to destruct, demolish, form, and to stick to the targets. They are stronger than TNT and used broadly in the civilian and military sectors. They are two kinds, C3 and C4. The first one is (C3), which is a yellow paste and affected by moisture. Long time storage causes the loss of its dough (paste) ability, and becomes easy to break. Its strength is 1.34 of the TNT (this means 1.34 x 7000 m/s). The second one is (C4), which is a white cotton dough shape and little bit affected by moisture. Its strength is 1.4 of the TNT strength.
5. Gellgenett: it is the strongest military explosive, and it is a mixture (blend) of C3 and C4 in a specific percentage.

Third: Explosives that have High Temperature

1. Ammonal: It is a highly explosive compound that contains a mixture (blend) of ammonium nitrate, aluminum dust, and TNT with the following percentages: 22 | 11 | 67 % in sequence. It explodes causing a brightness and high temperature. Substitute in the United States with another compound called Tritonal, which is a mixture (blend) of 80% TNT and 20% aluminum sand.
2. Amatol: It is a mixture (blend) that has a good reaction with ammonium nitrate and TNT. Its explosion speed is less than TNT, which makes it more flammable.

Fourth: Activated Explosives

1. RDX: It is the strongest and effective explosive. It has a solid structure and looks like crystals similar to the table salt. Its explosion speed is 8387 m/s. It is very sensitive to impacts, and ignites by heat and explodes at 196^{o} Celsius. It is used in detonators' industries and as an activator with the initiators. It is included in several essential explosives.
2. PETN: It is very soft white granulates that is used in making explosive cord (cortex). Its explosive power is 1.7 of TNT, very sensitive to banging, and ignites by a flame.
3. Picric Acid: It is very soft yellow granulates and extremely sensitive to temperature, friction, and impact (bang). It dissolves in water and is considered the official military explosive in France.

In the following session, we will start making explosive and other related materials.

Fourth Session: Manufacturing Explosives

Introduction: Explosives are dangerous materials and differ from other materials because you can't control or predict what might result of its explosion, or the reaction with other materials. This needs a long experience and solid practical background. Therefore, don't play with explosives, and don't explore adding one material over another. Please be careful, follow the instruction in detail, and don't disregard the instructions for the sake of your safety and the safety of your surrounding.

Important observations before the preparation of any explosive material:

1. Read the experiment more than once, understand it very well, and know the details and procedures.
2. Conduct the experiment in a well-ventilated place, or outside in an open area, or in a well-aired place. Don't stands near the air duct because some experiments produce poisonous gases.
3. Provide a large amount of water during the experiments, and don't underestimate this issue at all. Water in some cases stops the reaction, and also a good solvent for many explosive and acids.
4. Be calm and patient during the experiment, because most of the experiments need sufficient time, and might be a long period in some cases.
5. It is a well-known scientific principle, "add acid to the water and not the opposite."
6. Bring all needed ingredients and know them very well before conducting the experiment.

7. Abide by the instructions and steps word by word, and please don't minimize (short cut) these steps if you want to conduct the experiment safely.
8. Make sure you have all first aid materials available in large quantities.
9. The experiment has to be conducted if possible by a person who has scientific or academic background especially in chemistry.

Preparing Mercury Fulminate:

It is used as a booster and activator material in the detonators and explosive capsules industries. The materials needed to prepare mercury fulminate:

1. Concentrated sulfuric acid (90%) or more. This could be obtained from the medical laboratories, blood analysis center, or some pharmacies. At this concentration, the material has a yellow color.
2. Concentrated ethylene alcohol (90%) or more, (alcohol), or medial alcohol (ethanol).
3. Mercury which can be obtained from the thermometers and laboratories. It is better to use the silver color mercury.
4. Pure water of blemishes.
5. Lab equipment (cups, thermometers, glass stirring stick, filter paper).

Preparation Process:

1. Put 19 cm^3 of pure water in a glass container then add 75 cm^3 of nitric acid to the water to dilute it [with the observation that acid is to be added to the water and to notice that if the nitric acid is not concentrated (65 to 80%), there is no need to use water with it].
2. Put 1cm^3 of mercury over the diluted nitric acid, and then stir the mixture. This process might take a little time, but it is important to dissolve the whole mercury because the lack of dissolving affects the outcome. During the dissolving processing, some poisonous red smokes evaporate.
3. After dissolving all the mercury in the diluted nitric acid, you will notice the color of solution is greenish orange.
4. In a separate container, put 112.5 cm^3 of alcohol in a container that handles high temperatures. Then quietly pour the previous solution over the alcohol. We heat up the new mixture on a heater and without flame to 85^o Celsius. Our measurement is not to reach 85^o Celsius, but to see white smokes, which might appear before and after the 85^o Celsius. Move the container immediately from the heater (Be careful: these gases are flammable). If the reaction is intensive after pouring the mercury to the alcohol, calm the reaction by adding a little amount of alcohol to the new solution.
5. During the reaction process, you will notice that the mercury fulminate starts to deposit in the bottom of the container. After the end of reaction, it will be left for

a period of time not less than ½ hour, then filter the solution through a filter paper to get the fulminate particles (granulates).

6. The particles contain some acid traces. Therefore, they have to be removed by adding distilled water to the particles while on the filtering paper several time to remove the acid traces. To make sure the traces are gone, we check the particles by using the blue sunflower paper; if the color changes to red, this means the acid traces are still there.
7. After the removal of acid traces, the particles are dried at a normal room temperature 20 to 30 degrees Celsius (don't expose it to sun).
8. The particles are kept in a cold and dry place. They are isolated away from banging and friction until needed.

Preparing Lead Azide:

It is used as an inducing material for explosion and included in the manufacturing detonators, special shell capsules, RDX, or PETN to detonate the major packages.

Required Components to Prepare Lead Azide:

1. Sodium azide (from medical laboratories)
2. Lead nitrate
3. Distilled water (regular water is not good)
4. Filtering papers
5. Wood rod
6. Different sizes of glass flasks.

Preparation Process:

Put 25 grams of sodium azide in a glass container, then add similar volume of distilled water, and stir the mixture (blend) until the azide is completely dissolved.

1. Put 75 grams of lead nitrate in another glass container, and add the volume of distilled water until the nitrate is completely dissolved.
2. Add the sodium azide solution into the lead nitrate solution. We will notice the reaction starts immediately, and the lead azide particles are made and deposited in the bottom of container.
3. Filter the particles by using the filter paper, and then wash the particles in a large quantity of water (about a cup of water) while they are on the filter paper.
4. Leave the particles to dry at the room temperature (don't expose them to the sun). Then, store them in glass or plastic containers.

Observation: This is the simplest way to make initiators. There are other initiators, and their manufacturing is more complicated.

In the next session, we will start in making activators. For those brothers who are requested illustrations, these two compounds are very clear in the subject.

Fifth Session: Making Different Kinds of Gunpowder

Note: despite my promise of publishing the manufacturing of activators in this session, respond to the desire of some Mujahideen brothers, and I introduce the manufacturing of gunpowder before the activators, which I will publish in the next session in God's willing.

First: Black Powder
It is a sample of explosive mixtures.
Characteristics: it is attracted to moisture and loses part of its strength through the moisture. It burns in irregular flickering flames and this is one of its biggest defects. It inflames easily when touching a burning object, or a flame. It can be used in uprooting rocks and detonating sealed shells (mechanical explosion) that have several nails, and other smaller objects.

It is prepared in two ways: the first one is without solvents as follows:

1. 75% of potassium nitrate + 15% of vegetal charcoal + 10% of a yellow agricultural sulfate

Preparation Process:
The three substances are grinded individually until they convert to a powder. Then mixed together very well until the mixture (blend) is perfect, and the gunpowder is then ready for use. (It is recommended to isolate it from moisture).

2. 75% of potassium chlorate + 12.5 of vegetal charcoal + 12.5 of a yellow agricultural sulfate

Preparation Process:
All three substances are grinded separately (be careful when you grind the potassium chlorate, and must be grinded very carefully because it is sensitive against friction and heat). Then, you mix them together gently until they blend together, and then the gunpowder is ready for use.

3. 70.4% of potassium nitrate + 10.2% of sodium sulfate + 19.4 of a yellow agricultural sulfate, and to follow the same previous process.

Observation: The percentages are weight percentages according to the amount needed to prepare. In other word, if we wish to prepare 1 kg of black powder, 75% of it will be potassium nitrate (about 3 | 4 of kilo), 15% of vegetal charcoal, 10% of yellow agricultural sulfate, and so on.
Second: by using solvents
The percentages used in this way are similar to the previous process with the addition of the ethylene alcohol (ethanol + alcohol) and water. We will discuss a sample of potassium nitrate.

Needed Substances:
22.5 grams of potassium nitrate + 4.5 grams of vegetal charcoal + 3 grams of yellow agricultural sulfate + 15 cm^3 of distilled water + 65 cm^3 of ethylene alcohol.

Preparation Process:

- Grind all three substances separately very well and gently.
- Mix the three substances very good and gently.
- Add ½ of the water amount to the mixture (blend), stir until they blend together, and then add the remaining of the water.
- Heat up the mixture (blend) gently until the bubbles come out of the mixture (the mixture must not boil, must keep its moisture, and must not dry).
- After seeing the bubbles, it should be poured immediately into the alcohol with stirring, and after it gets homogenous, it will be left for 4 minutes.
- The mixture is then filtered by pouring it over a piece of cloth, and gently squeezed of water. Then, it will be left in the sun to dry because the more delay we have, the less effective the black powder will be.
- It should be stored away from moisture after dryness.

Second: White or red gunpowder
This kind is used in weapons and shells as a propellant material, and can be prepared in a safe and easy way:

Needed Substances:

- Potassium nitrate
- Granulates white sugar
- Ferrous oxide powder (you can get it from the agricultural stores), and used as a booster. It is not an important substance if you can't find it.
- Pure water
- Heat source
- Wood spoon
- Metal filter

Preparation Process:

1. Put 480 cm^3 of sugar in a container that can handle the temperature, then add to it 560 cm^3 of potassium nitrate, and pour 840 cm^3 of pure water to mixture.
2. Place the mixture over a low fire and stir gently until the whole mixture blends in the water.
3. Add 30cm^3 of ferrous oxide (if available), which is better for the mixture, and stir gently until the mixture boils.
4. Continue in stirring until the mixture is reduced to 1/4th of its volume, and becomes heavier.
5. Display the mixture on an aluminum plate.
6. Expose the mixture to the sun until it dries completely.

7. Rub the substance part by part above the metal filter and expose it again to the sun to insure a complete dryness of granulates.
8. Keep it away of moisture until further need.

Third: Smokeless Powder (nitrocellulose)
It is used as propellant charges in some shells.

Needed Substances:

- Medical cotton
- Concentrated nitric acid (90% or more)
- Concentrated sulfuric acid (90% or more)
- Pure water (you can discount it if the concentration of two acids is less than 80% and more that 65%)
- Heat source
- Ice water
- Acetone

Preparation Process:

When both acids are concentrated:

1. Put 20 cm^3 of water in a container, and then add to it 250 cm^3 of sulfuric acid while the mixture container is placed in a larger ice container (ice bath). The temperature should not exceed 25^o Celsius.
2. After the completion of adding the sulfuric acid, add the nitric acid to the mixture. (Also the temperature should not exceed 25^o Celsius and the container should be in an ice bath).
3. The previous two steps are not needed if the acids are not concentrated and can be mixed directly.
4. Add the medical cotton in small pieces to the mixture and stir it good.
5. We continue the process until we get a heavy mixture (blend).
6. We can discard the remaining acid after squeezing the cotton by using the stirring tool to get rid of the acid completely.
7. We wash the cotton pieces that are rich in acid by boiled water for 25 minutes and to be done five times.
8. Dry the cotton under the sun.
9. Add acetone to the cotton in portions and stir until you get a stick mixture (blend) similar to the dough.
10. Leave it to dry or pour it in molds, and leave to dry until further need.

Smokeless white and red gunpowder can be used as bullets propellant, but the amount needed to be calculated according to the kind of the gunpowder. For example, the Kalashnikov bullet is charged with 1.65 grams of nitrocellulose, the G bullet is charged with 2.7 grams of nitrocellulose, and the 12 mm shell is charged with 3 grams of red or white powder.
It is better to review the number for accuracy.

In the next session, we will continue in manufacturing explosives.
Don't forget me of your prayers.

Sixth Session: Making Activators

They are essential explosives that can be used individually for detonation and explosion. Because of the economical reasons and their extra sensitivity compared to other the essential explosives, they are used in detonators, and as a booster to other inducing substances inside the detonators, which are the discussed initiators in the previous session.

Some of these substances:

1. RDX
2. Picric Acid
3. PETN
4. DDNP

And other sources

First: Preparing RDX
It is a highly effective explosive and at the same time works as an activator, and included in making detonators.
It can be prepared in two ways: The first one is through getting it from C4 (in this case, if we can obtain C4, there is no need for RDX)

Needed Materials:

1. Gasoline (benzene)
2. C4 explosive
3. Two wide neck glass containers.
4. Paper filter
5. Wood or glass spoon
6. Teaspoon
7. Cup

Preparation Process
First: from C4

- Put about 15 grams of C4 (1 ½ of tea spoon) in one of the two containers, and add 240 cm^3 of benzene. The amount can be multiplied according to the need.
- Stir the mixture by using the glass or wood spoon until it dissolves the C4 into very small particles. Then leave the mixture for a complete ½ hour without stirring.
- Stir and mix again until you see small white particles in the container start to deposit in the bottom.
- Filter the mixture in the other container through the paper filter, and then wash the entrapped particles on the filter, and wash them with more benzene (about ½ cup).

- Dry the particles in room temperature 20-30^{o} Celsius, and then store them is a sealed container.

Second: Lab Preparation
Needed Substances

1. Hexamine tetramine (butrobine) can be obtained from laboratories or chemical stores, or universities.
2. Ammonium nitrate (nitrogen percentage is more than 33%)
3. Concentrated nitric acid (more than 90%)
4. Wide neck glass container
5. Large tub for the ice bath
6. Heat source
7. Glass or wooden stirring stick
8. Filtering papers
9. Sodium carbonates
10. Pure water
11. PH papers, which is papers to measure the hydrogen potency in the solution where it gives red color if the center is acid, and gives blue color if the center is a basis (?).
12. Thermometer

Preparation Process

- Put 5 grams of butrobine in a container and add to it 48 grams of ammonium nitrate, and blend them together.
- Place the container in an ice bath after mixing, and add to it gently and in batch process 57 cm^{3} of concentrated nitric acid, and stir gently. Make sure the temperature of the mixture (blend) should not exceed 15^{o} Celsius.
- After adding all the acid and complete the stirring, place the mixture over a heat source (watch out for the direct flame), and raise the temperature of the mixture to 80^{o} Celsius, and keep at this level for ½ hour. The temperature should not exceed 81^{o} Celsius and should not go bellow 79^{o} Celsius for ½ hour. The best way is to use an electrical heater where you can keep the temperature on 80^{o} Celsius or you can monitor the thermometer, when the temperature reaches 80^{o}, you lift the mixture for a little bit, and then you return it again if the temperature becomes closer to 79.5^{o}, and so on.
- Important Warning: During the heating, harmful gases to the eyes and body are going to evaporate; you must be cautious, and keep your distance.
- After completing the heating process for ½ hour, the mixture is left to cool down until it reaches 20^{o} Celsius.
- The RDX particles will be clear and the remaining liquid is the ammonium nitrate.
- The RDX crystals will be affected by acid traces and to balance that, we filter the crystals through a filter paper, and place in another container. Then, we add to it 5% concentration of sodium carbonates. (This means to dissolve the sodium carbonate in the percentage of 5 grams + 100 cm^{3} of pure water). The adding process in done gently and in several periods. During the reaction, you will hear a reaction sound.

- We test the solution through the testing paper. If the color changes to brown (before blue), we stop the addition of sodium carbonate. The reaction is completed.
- Heat up the new solution after that until most of evaporates, and not all of it. If it evaporates completely, the RDX particles will melt (spontaneously during the evaporation, you will notice a sticky liquid, which is the melted RDX, and don't pour it).
- Cool off the container that has the remaining solution until the RDX particles deposit well.
- Dry the particles, then add drops of the concentrated nitric acid to complete the formation of RDX.
- To purify the RDX from blemishes, do the following:
  - Put some acetone in an empty glass jar and heat it up in water until 80^{o} Celsius, and the RDX spoon by spoon until is completely dissolved in the acetone. We leave it to cool off in the room temperature, which is about 25^{o} Celsius.
  - After one hour, the pure particles will appear again, and we do the filtering and keep them in a sealed container after dryness in room temperature.

Second: Preparing the Picric Acid Explosive

The Picric acid explosive is considered one of the highly combustible explosive, and can be used alone if it has large quantities.

Needed Substances

1. Aspirin tablets (contains phenol)
2. Regular ethylene alcohol 95% concentration
3. Concentrated sulfuric acid (from cars' batteries)
4. Potassium nitrate
5. Distilled water
6. Filter papers
7. Large container (tub)
8. Glass stick for stirring
9. Various glass containers
10. Heat source
11. Glue tape

Preparation Process:

- Grind 20 aspirin tablets in a glass container, add to them 1 table spoon of distilled water, and stir the mixture.
- Add ½ cup of the alcohol (about 100-120 cm^{3}) to the mixture and do a good stirring.
- Pour the mixture inside another container through paper filter, and get rid of the substance on the paper filter because we don't want it, but we want the solution.

- Make a hot bath to this solution until the water and alcohol evaporate. (Don't increase the temperature more than 80 degrees). It will leave a white powder.
- Add the white powder to 80 cm^3 of concentrated sulfuric acid (and not vice versa).
- Heat up the new mixture inside a warm water tub for 15 minutes, and until the changes to yellow closer to orange.
- Add 15 grams of potassium nitrate in three stages to the yellow made solution, and stir it. The solution will convert into a red color, and then will return again to the yellow color closer to orange.
- Leave the mixture to cool off gradually with the continuation of stirring.
- Add the solution to a 1 ¼ cup of cold water and continue in stirring.
- Pour the solution into another container through a paper filter. The yellow particles will be trapped on the paper filter.
- Wash the particles while they are on the paper filter buy using a little water (about 2 table spoons)
- Dry the yellow particles in the temperature of hot air. The particles are the required substance.

In the following session, we will continue to discuss the manufacturing of activators.
Don't forget me of your blessing.
God bless you.

In preparation of RDX, there is no need to add ammonium nitrate, and it has no role. The process is as mentioned, but without ammonium nitrate.
I would like to add that hexamine could be prepared in an easy way through the reaction of ammonia with formaldehyde according to this formula:

$NH_3 + 6HCOH \rightarrow$ 1 Hexamine + 6 H_2O_4

Therefore, the amounts are calculated according to the concentration.
The solution is then dried on the fire at the beginning of the deposit. It will be quickly flipped while using low fire using the heat distributor to avoid its burning.
Hexamine is moisture absorbent; therefore it must be used quickly and stored in a sealed container.

You can see processes of preparation on the following web site address: www.totse.com
It also contains ways to prepare nitroglycerin and acetone peroxide.

Observation: English files need to be edited because most of them have mistakes. In general the best source of English files is the pyrotechnics forum: **rec.pyro**

Instead of aspirin tablets, you can prepare the aspirin in an easy and cheap way:

1. Salicylic acid
2. Acetic anhydride

The addition is conducted in a water bath with continuous stirring for one full hour. After that, add to it 80ml of water, and you notice aspirin crystals. Filter and dry them.

Please give more detail about the preparation of hexamine.

490 ml of formalin is added gradually to 290 ml of ammonia. You will notice the increase in temperature because the result is a temperature centrifuge.
It should be left for few hours to dry through evaporation, and when the substance appears, it should be stirred in a quick way and left to dry.
Poisonous smells are emitted during the heating and you must have a good ventilation system. The formalin concentration is 36%, which is available. The ammonia concentration is 28%, which is available.
Usually, the ammonia concentration is less than the writing because it continuously evaporates. Therefore, you need to add more than what you need, and you can make sure whether the smell of formaldehyde is gone or not. According to that evaluation, you can add more ammonia until the smell becomes an ammonia smell. At the end, the ammonia will evaporate because of the temperature, and be cautious of direct smelling because it is harmful.
If you have different concentration and you want to calculate the amount, please mention that.

I remembered an important point:

- Dry the particles, then add drops of the concentrated nitric acid to complete the formation of RDX.

Please remember of not having any RDX acid remains, because they will be stable, and I don't know why we add the acid after making the RDX, unless the addition of acid will not make it acidic (because of the remains of sodium and acid are equal to that). But, always check its acid level and don't keep acidic.

Seventh Session: Continuation of Making Activators

We will continue in this seventh session the manufacturing of activators (explosives)

Manufacturing PETN Explosives:

It is a crystal substance in the pure status. It looks like a powder when you touch it. It melts at 141^{o} Celsius and can be in several ways, such as:

Needed Tools and Substances

- Glass stirring stick
- Temperature resisting container that handles 4000 ml
- Large filter papers
- 1 or 2 plastic buckets
- Plastic or wood spoon
- Drying containers like a tray
- Paper cups
- Mask and safety glasses
- Rubber gloves
- 2 heat resistant scaled tubes
- 600 cm^3 of nitric acid and the concentration is not less than 98%.
- 250 cm^3 of high quality Pentacrythrite. (From labs)
- 1500 cm^3 of pure acetone
- 1 spoon of sodium carbonate powder
- 800 cm^3 of distilled water
- 40 gallons of regular water
- Sunflower papers to test the acid
- Sunflower papers to test the level of PH within the acid range 0 to 7
- Crushed ice
- Observation: You can obtain all of these substances through the pharmaceutical companies.

Preparation Process:

1. Put 600 cm^3 of nitric acid in a 1000 cm flask (Don't forget to wear your mask and gloves).
2. Place the acid container in the largest container.
3. Put the crushed ice in the large container up to the level of acid in the small container.

4. Pour regular water in the large container over the ice until it reaches 700 ml in the small container. (It will cover the acid completely at the height level, and be careful of the water or ice of reaching the acid, and change its concentration).
5. Place a thermometer and stick it into the tube wall where the mercury level is little bit below the level of acid.
6. Gently place the glass stick into the acid for stirring.
7. Prepare 250 cm^3 of Pentacrythrite in a glass or paper cup.
8. Start stirring the acid in the tube gently, and notice the temperature until it reaches 10^o Celsius.
9. When the acid reaches 10^o Celsius, start pouring the substance gently into the Pentacrythrite little by little from the edge of the cup. The solution will start rising as well as the temperature. Stop immediately when it reaches 18^o Celsius, and until the temperature drops to 10^o Celsius, and then continue until you pour the whole substance, and the temperature should not exceed 18^o Celsius.
10. Remove the container from the tub, and leave it aside until the reaction stabilizes for five minutes.
11. White yellowish crystals will be formed in the bottom. They are the PETN, and have an acid layer on them.
12. Stabilize the acid slowly without pouring out the bottom deposited substance.
13. Fill up the plastic bucket with 2 gallons of distilled water.
14. Pour the PETN with the remaining of the acid in the plastic bucket, and stir by using the glass stick.
15. Continue the stirring for 15 seconds, and then wait until the stabilization of PETN.
16. If you see an oily layer on the top of the water, stir the surface of the water until it leaves a spectrum of a thin layer at the surface, and the crystals deposit in the bottom.
17. After the deposit of the crystals, take a yellow sunflower paper and immerse it in water. If the color changes to red, this means there are still sufficient amount of remaining acid, and you repeat washing the crystals in the same way again and again until the traces of acid on the paper are gone.
18. Get rid of the water without losing the PETN, and leach the PETN by using the paper filter placed in a glass cone (1000).
19. Take the substance and spread it on a tray in a thin layer shape until it dries completely, and for several days.
20. The substance will be just a white crystal after dryness. We keep it and continue the following step to clean the PETN.
21. Take one tablespoon of sodium carbonate and add it to the flask, and then add 880 cm^3 of distilled water.
22. Stir until the carbonate dissolves completely.
23. Fill up the large container with 1500 cm^3 of acetone, and place it on a heating plate with the thermometer. Start stirring the acetone and keep the temperature between 50 to 60^o Celsius. (Be careful of exposing the acetone to any direct heat source, because it is flammable at 55^o Celsius and very dangerous).
24. Add two tablespoons of the substance to the acetone and let it dissolve. After that, the temperature will drop, and when it reaches 50^o Celsius, add two additional spoons and pour them in the acetone, leave them to dissolve, and the temperature will rise again

because of the heater and the temperature reaches 60^{o} Celsius. Then add two new spoons, and so on. Repeat the process until the all PETN is dissolved.

25. Keep the temperature at 55^{o} Celsius.
26. Add 10 cm^{3} of sodium carbonate, which was diluted previously in distilled water to the acetone.
27. Put a blue sunflower paper in the solution. If the color changes to red, add additional 10 cm^{3} of sodium carbonate to the acetone, then put a new paper and son on until the color of the paper stays the same (blue). Now, test the red paper, if the color change to blue, the solution is then stabilized.
28. Turn off the heater.
29. Immediately fill up the bucket with two gallons of cold water, and pour in it the contents of mixture and stir it very well. At that time, pure PETN crystals are formed very quickly.
30. Check the water in the bucket by using red and blue sunflower papers. It should not be any changes, and if there is a change, this means you made a mistake, and you must repeat the procedure, because the crystals are not good in this way.
31. Now we clean the PETN particles from acetone similar to the steps 12 and 13 until the smell acetone is disappeared.
32. After the sediment of the white particle, leave them to dry completely from moisture.
33. PETN is kept in a dry and dark place.

We sill start making the essential explosives in the next session,
Don’t forget me of your blessing.

Eighth Session: Making TNT and Nitroglycerine

Introduction: This session is considered the last of the series in making explosive materials within my knowledge. I have tried to present useful information instead of theoretical information that is hard to apply, because of the unavailability of its substances, or the difficulty in preparing it. We ask Allah to benefit us of the knowledge and I will in God's willing introduce the second stage of preparation of detonations, explosive packages, ways of detonating, and places to put the explosive packages to be more effective, etc.

Preparing TNT:
Required substances:

- Toluene: it is a colorless liquid that has a special smell. It boils at 110^{o} Celsius, and doesn't mix with water. It burns making a smoking flame, and used as a solvent to many organic materials. You can obtain it is form medical laboratories or universities.
- Concentrated nitric acid (more than 90% concentration)
- Concentrated sulfuric acid (more than 90% concentration)
- Heat resistance containers.
- Flameless heat source.
- Pure cold water.

Preparation Process:

1. We prepare two cups separately as follows:
2. Put 1 cm^{3} of water with 16.7 cm^{3} of nitric acid, and 45.6 cm^{3} of sulfuric acid in one cup. There no need to add water if the acids are not concentrated.
3. Put 11.2 cm^{3} of nitric acid with 7 cm^{3} of sulfuric acid in the other cup.
4. Take 5.6 cm^{3} of the first cup and place it in an ice bath.
5. When the temperature reaches less than 10^{o} Celsius, we gently add the toluene to the mixture, and stirring the mixture gently too.
6. Stir the solution gently and move it from the ice bath, and start heating the solution to 50^{o} Celsius while stirring.
7. When the temperature reaches 50^{o} Celsius, add 28.4 cm^{3} of the first cup mixture to the solution. The temperature should not rise above 50^{o} Celsius.
8. Raise the new mixture temperature to 55^{o} Celsius and keep it at this level for ten minutes. (It should not go above 56^{o} Celsius or below 54^{o} Celsius).

9. Reduce the temperature to 45° Celsius and wait a little bit. An oily layer will be formed on the surface of the mixture. Suck it out by using a syringe and get rid of the remaining acid.
10. It is preferred to place the solution before sucking out the oily layer in a thin container to enable us to see the oily layer, and to suck it out gently from the mixture.
11. Now, add 18.3 cm^3 from the first cup mixture to the oily liquid gently, slowly, and without stirring.
12. Raise the temperature of the new mixture to 83° Celsius and keep it at this level for ½ hour.
13. After that, reduce the temperature to 60° Celsius and keep it at this level for another ½ hour.
14. The oily layer will appear again. Suck it out and get rid of the remaining acid.
15. Observation: The last acid is useful in making a less sensitive explosive by adding ammonium nitrate to the acid in a 20%-80% sequence.
16. Now, add 18.3 cm^3 of sulfuric acid to the oily liquid gently, slowly, and without stirring.
17. Raise the temperature of the new mixture to 80° Celsius. When you reach this degree, add gently, slowly, and without stirring an additional 18.3 cm^3 of the second cup mixture.
18. At the end, we raise the temperature to 104° Celsius exactly, and we keep it for three hours. (Don't increase above 104.5° Celsius and don't decrease it below 103.5° Celsius).
19. Reduce the temperature now to 100° Celsius and keep for ½ hour.
20. We notice the oily layer again, which is the TNT substance. We suck it out and get rid of the remaining solvent.
21. We add boiled water to the oily liquid and stir it to clean it from any traces of acid. We repeat the process for three times, and each time we add 120 cm^3 of water, and suck out the oily liquid after that, and then we get rid of the water.
22. Add 240 cm^3 of cold water to the oily liquid until the oily layer settle and make a white yellowish color.

Warning: When you get the TNT from the surface, the mixture gets cold, the upper layer freezes a little in addition to the part of the bottom layer, which is the acid layer. We don't withdraw this part and only withdraw the upper layer.

In the three stages of sucking out the oily layers, there are an estimated percentage of the oily liquid presents in the acid. We add cold water to the remaining acid until the part of frozen layer is settled, and added to the oily layer before getting rid of the acid.

Nitroglycerine Preparation
First way: by using glycerin

Needed Substances:

- Concentrated sulfuric acid (more than 90%)

- Concentrated nitric acid (more than 90%)
- Pure glycerin (used as paint)

Preparation Process:

1. Put 5.2 cm^3 of concentrated nitric acid inside a heat resisting container, and then place the container in an ice path until the temperature reaches 15^o Celsius.
2. Add 15.6 cm^3 of sulfuric acid gently and at several periods, and make sure the temperature does not exceed 20^o Celsius.
3. Reduce the temperature of the mixture to less than 8^o by adding more ice.
4. Add 2 cm^3 of glycerin drop-by-drop and be very carefully, and stir gently.
5. The temperature should not increase more than 9^o Celsius.
6. After the completion of adding all the glycerin, we continue stirring gently for five minutes. An upper layer of glycerin will be formed.
7. Prepare a base solution 5 cm^3 of sodium carbonate and 100 cm^3 of very cold pure water, and then add the sucked out nitroglycerin.
8. Suck out the nitroglycerin from the base solution by using the dropper, and repeat the above step three times, because leaving any acidic traces makes the nitroglycerin dangerous and unstable.
9. Keep the nitroglycerin in a sealed and cooled container.

Second way: by using alcohol
Needed substances

- Concentrated nitric acid
- Concentrated sulfuric acid
- Methanol alcohol, which is obtained from pharmacies and construction supply stores.

Preparation Process

1. Put 16.5 cm^3 of nitric acid in a container, and place that container in an ice bath. Decrease the temperature to 15^o Celsius.
2. Add 24 cm^3 of the sulfuric to the nitric acid gently and in portions, and make sure the temperature does not increase more than 20^o Celsius.
3. Decrease the temperature to 10^o Celsius.
4. Now, slowly, and very gently add 13.5 cm^3 of methanol alcohol and stir it very slowly.
5. Be careful of this stage. The temperature should not exceed 25^o Celsius. If the temperature rises more than 30^o Celsius, pour the solution to the iced water to avoid explosion.
6. After pouring the whole alcohol, stir slowly for 40 seconds, and then leave the solution in the ice bath for five minutes.
7. We notice the formation of nitroglycerin above the solution. Suck it out by a dropper and repeat steps 7, 8, and 9 of the first way to get ride of acid traces.
8. The nitroglycerin is kept in a sealed container and stored in a cold place.

Nitroglycerin is the major element in making dynamite and explosive materials. We presented that in the previous sessions on how to use the nitroglycerin suitably.

When mixing the nitroglycerin with other components, an extreme caution has to be taken, and the mixing environment has to be kept cold to complete the mixing. (You can review the percentages of dynamite components and other explosives from the previous lectures).

We ask Allah to benefit us of what He taught us. We will start in future sessions to make explosive packages, bombs, detonators, and others.

Don't forget me of your blessing.
May God bless you and bring to us more people like you.

If possible, I have some observations:

1. Nitroglycerine is dangerous and unstable. Therefore, when you prepare large quantities, you should very careful, and must use it immediately in making dynamite, and don't store it for a long period.
2. Must be assured that the nitroglycerin is balanced and has no acid through the use of acid measure (sunflower papers).
3. Glycerin deposits in the bottom and not the top.
4. I did not hear its use in paints, but in crèmes, and it is available in pharmacies.

Ninth Session: Making Detonators

Thanks to the greater Allah, God of People.
We start with a new series that specializes in making explosive, flammable packages, detonators, bomb letters, and others supported by illustrations.

Making Detonators:

The series of known explosion is the initiator, detonator, and major explosives. The initiator is usually a flame, heat, or impact. The detonator has a small inducing charge and has a small activating charge that burst sending a sufficient shockwave to detonate the major package.
All of the current detonators contain a suitable initiator, and we will know in this session how to make a detonator and have it ready for detonation.
There are two kinds of detonators; electrical detonator and a detonator with a safety cord. Both of them contain the same contents, and the difference is only in the initiation.

Needed Materials:

- Black gunpowder
- Bulbs of hand battery
- Thin aluminum pipes (6 mm to 1 cm in diameter). You can obtain them from the TV antenna or any other sources, and must be welded from one end.
- Thin copper pipes (6 mm to 1 cm in diameter). You can obtain them from the refrigerator repair shop or any other sources, and must be welded from one end.
- You can ignore the aluminum and copper pipes, and use the cover of plastic syringes.
- Lead azide
- Mercury fulminates
- RDX, PETN, or picric acid.
- Thin electrical wires and must be covered in plastic.
- Tools: pliers, scissor, rubber dough, tape, Arabic liquid glue, etc.

Manufacturing Process:

1. We prepare the pipe as shown in figurer 1.
2. When using lead azide, we use the aluminum or plastic pipe.
3. When using mercury fulminates, we use the copper or plastic pipe.
4. Break the battery bulb carefully without touching the tungsten wire (illuminated wire), and don't touch the connecting wires as shown in figure 2.

i. Put one gram of RDX, PETN, or picric acid, whatever available (RDX is the best) in the bottom of the tube and press it gently and cautiously by using a wood or glass stick. Then, put a small drop of Arabic glue to stick it in the tube bottom. (It can be mixed gently with glue before putting it in the bottom of the container).

5. Add to it one gram of lead azide or mercury fulminate, and be cautious about the metal object as mentioned above.
6. The detonator is ready for use now.
7. If we want to manufacture an electrical detonator, we do the following:
8. Mix a small amount of black gunpowder with glue, which is sufficient to cover the tungsten, and stick them gently to the tungsten wire.
9. Tie up the two ends of tungsten wire with two thin wires as shown in figure 3.
10. Place it gently inside the pipe until it touches the inducing material.
11. Isolate the pipe of all its contents by using rubber dough.
12. The electrical detonator is ready for use as shown in figure 5.
13. If we want a regular detonator:
14. Mix a small amount of black gunpowder with glue that is sufficient to cover the inducing material in a very thin layer, and place them inside the pipe and above the inducing material very carefully.
15. The detonator is ready as shown in figure 5. When used, we insert the safety wire until it touches the black gunpowder, and then press the upper edge of the pipe gently until the wire is settled inside the pipe.

It is very important to test the detonator on an essential explosive material to insure its effectiveness; otherwise the amount can be increased in a small percentage where the density of major substance affects the shockwave. The higher the density, the higher the need for a stronger shockwave and the results will be stronger.

We will make some bombs in the next session
Don’t forget me of your blessing.

Tenth Session: How to Make Flammable Bombs

There are several kinds of flammable bombs, and the most popular one is the napalm, which is banned internationally. (Most of them are using it). We will make in this session two kinds of flammable bombs.

Napalm Bomb:
The napalm substance is flammable, gives a very high temperature, and contains the following:

- Vegetal soap (regular washing soap)
- Aluminum sulfate
- Phenaphol

The major element of this mixture (blend) is the vegetal soap.

Preparation Process:

1. 70% of vegetal soup
2. 15% of aluminum sulfate
3. 15% of phenaphol and can be ignored if it is not available, and the new percentages are as follows:
4. Put the substances in a container and place them on a flame source, stir until the mixture is blended, and the napalm substance becomes ready for use.

Preparation Process:

1. Mix 10% of the napalm with 90% of benzene and put them in a container.
2. Prepare TNT in a 2-inch metal tube. It has to be sealed from one side, and has a metal cap with a hole in it for the explosive capsule. The tube itself can be tied up to the original body of the bomb. (Its diameter is not less than 12-inches), and the length is as needed (look at the figure). TNT preparation can be done through melting and casting it in a tube).
3. Place the mix napalm with benzene in the major container of the bomb, where it fills only 75%, and leave the remaining 25% empty. (Look at the figure)
4. Now, tie up the TNT tube inside the major container. (The tie up must be very firm where it restrains the air inside the major container).
5. Place the detonating capsule in the TNT tube. It has to be immersed in it, and tie it up firmly.
6. The bomb is ready for detonation. (The detonation can be done by either electricity of safety cord)
7. This bomb spreads the flammable napalm as well as specific amounts of fragments.

Thermit Bomb
This bomb contains the following mixture:

- Ferrous oxide
- Ammonium nitrate
- Aluminum powder
- Magnesium powder
- Gasoline (Trucks fuel)

Preparation Process

1. Grind 160 grams of ferrous oxide until its particle becomes very soft.
2. Grind 20 grams of ammonium nitrate to become soft like powder.
3. Put the ferrous oxide in a container and add to it the ammonium nitrate + 45 grams of aluminum powder + 20 grams of gasoline + 30 grams of magnesium powder.
4. Mix the mentioned substances very well and quickly. You need expedite the mixing because the ammonium nitrate is a high absorbent of moisture, and leaving it a while without mixing weakens its blasting force.
5. The mixture is kept in a moisture-resisting container (glass or plastic).

Preparation Process:

Pour the mixture into a metal container and firmly seal it. Leave a hole in the cover to insert a detonating capsule (or detonator). Look at the figure.

Observations:

- It is preferred to put an amount of potassium chlorate and sugar at 1:1 percentage over the mixture before sealing the container.
- This bomb produces high temperature that reaches 1000^{o} Celsius with fragments if a large amount of nails stuck to the wall of the metal container.
- The size of the bomb can be controlled through doubling the amounts in specific percentage.

In the next session, we will make number of directed bombs, which are very important.

Don't forget me of your blessing.

Eleventh Session: Making Directed Bombs

Making Directed Bombs

I give my apology for the delay because I was busy in the past. It is very difficult sometime to place explosive packages at the enemy road for several reasons like the area is monitored, or natural reasons of the area, or crowdedness in traffic, etc, which made the Mujahideen carry and move with the explosives, and martyr with them.
For that reason, the use of charges or directed bombs came effective toward the enemy (personnel or machineries). They can be used from a distance of 70 meters.

Needed Materials to Make the Directed Bomb:

- Part of a ferrous ball (14 cm diameter and 6 mm thickness). It can be 5mm or 7 mm. The arch depth is 2.5 cm (look at the figure). This is called a lining.
- Circular box of plastic that has a 14.1 cm diameter and 6 to 7 cm depth.
- Explosive substance (Preferred RDX or C4).
- Three pipes (You can use the plastic sucking pipes or something similar)

Manufacturing Process:

1. Make a hole in the middle bottom of plastic container where you can insert the detonator through it.
2. Put a piece of plastic or iron similar to the detonator, flatten the bottom of the container, and stick it there where one end appears from the bottom. (You don't need this step if you are using the C4 as an explosive material).
3. Pour the explosive in the container.
4. Put the lining at the top of the container where it should be curved inwardly and concaved outwardly (Look at the figure). Emptiness must be filled up with explosives.
5. Now, pull out the plastic or metal object from the bottom, which will leave a space equal to the size of a detonator.
6. Insert the detonator it that place.
7. Stick the pipes on the sides of the plastic container from outside, and at the same length of the container. (These pipes are used to direct the bombs).
8. The bomb is now ready for use.

Observations:

- The bomb is placed at a suitable distance about 70 meters of the target and at a height not less than 1 ½ meter from the ground. To ensure hitting the target, you can look at it through the three pipes.

- It is better for the bomb itself to be positioned on a solid object (wall, rock, or heavy metal object).
- This bomb can target the assembled personnel, light machinery, or a car.
- If we want to use a similar bomb to hit a larger number of personnel, and at a wider area, we change the fourth step in manufacturing where we put the lining curved outward and the concaved inward, and consequently the explosive material has to be increased to cover all spaces.
- If a suitable lining is not available, we can use similar lining with the same shape, and has to be thin from any metals (possible to form). Then, we glue on every surface some steel balls or nails, but this bomb is only against personnel (look at the figure).

Figure 1

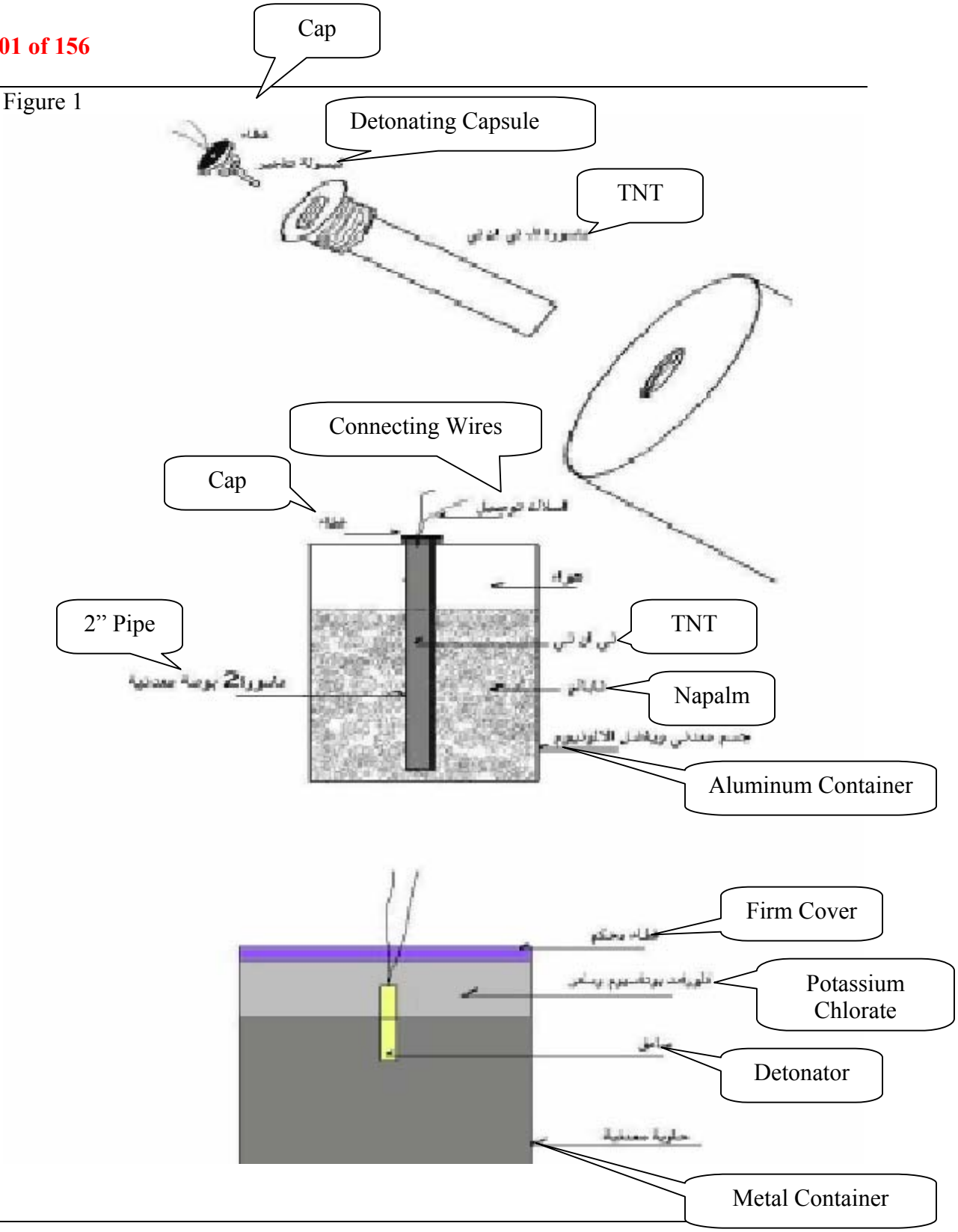

Cap
Detonating Capsule
TNT
Connecting Wires
Cap
2” Pipe
TNT
Napalm
Aluminum Container
Firm Cover
Potassium Chlorate
Detonator
Metal Container

Figure 2

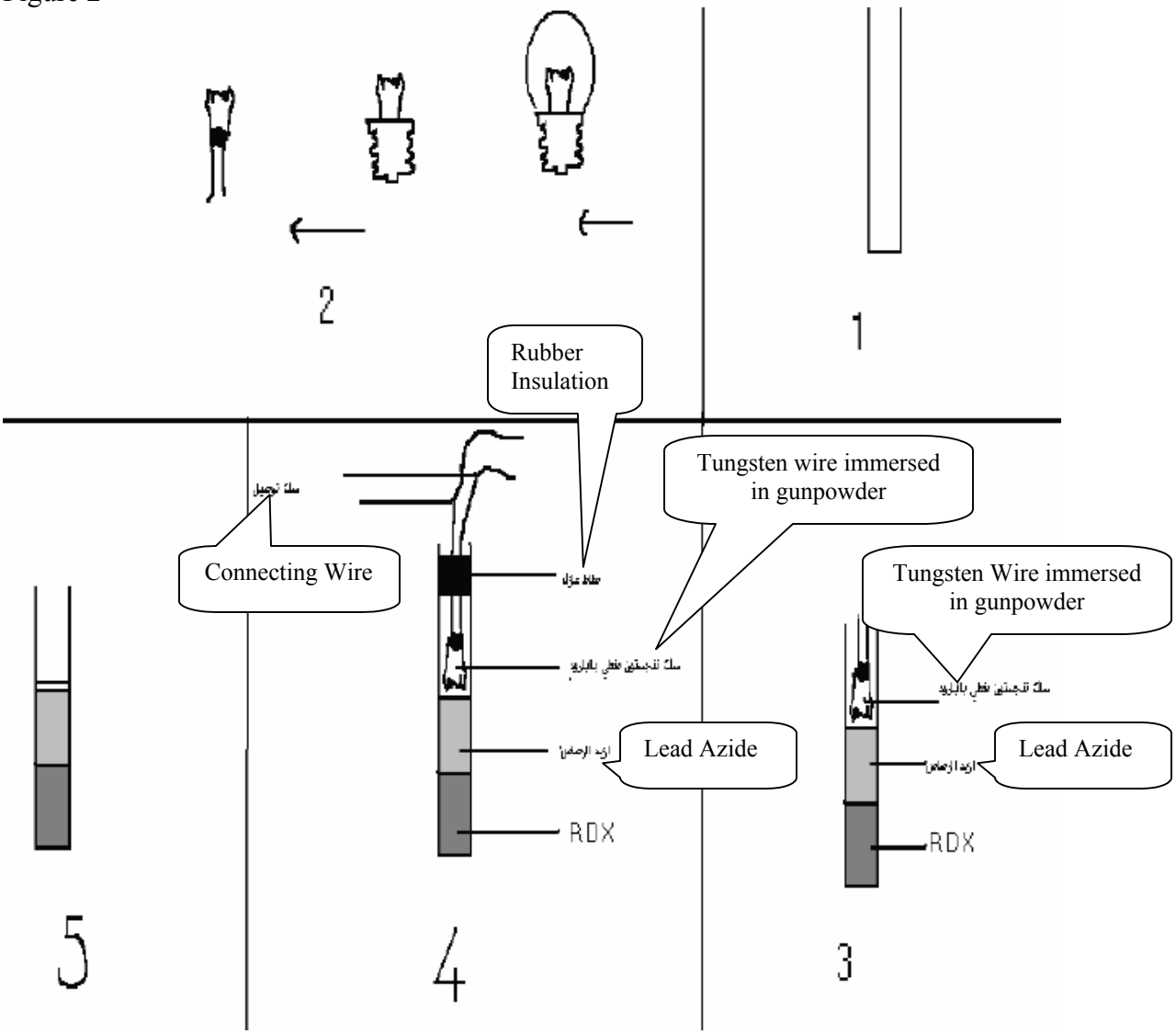


Figure 3

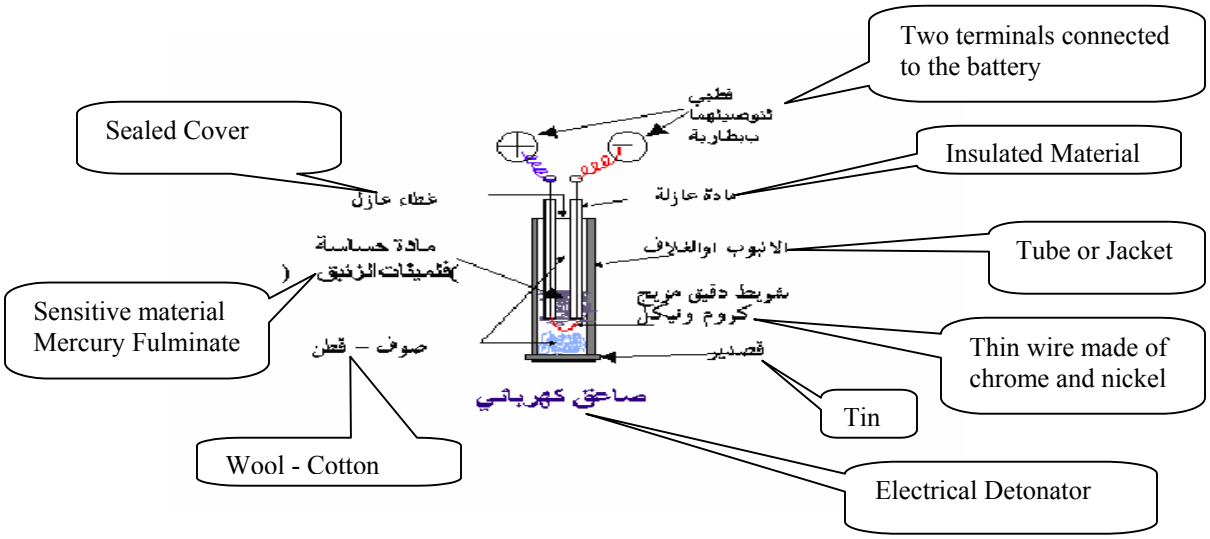
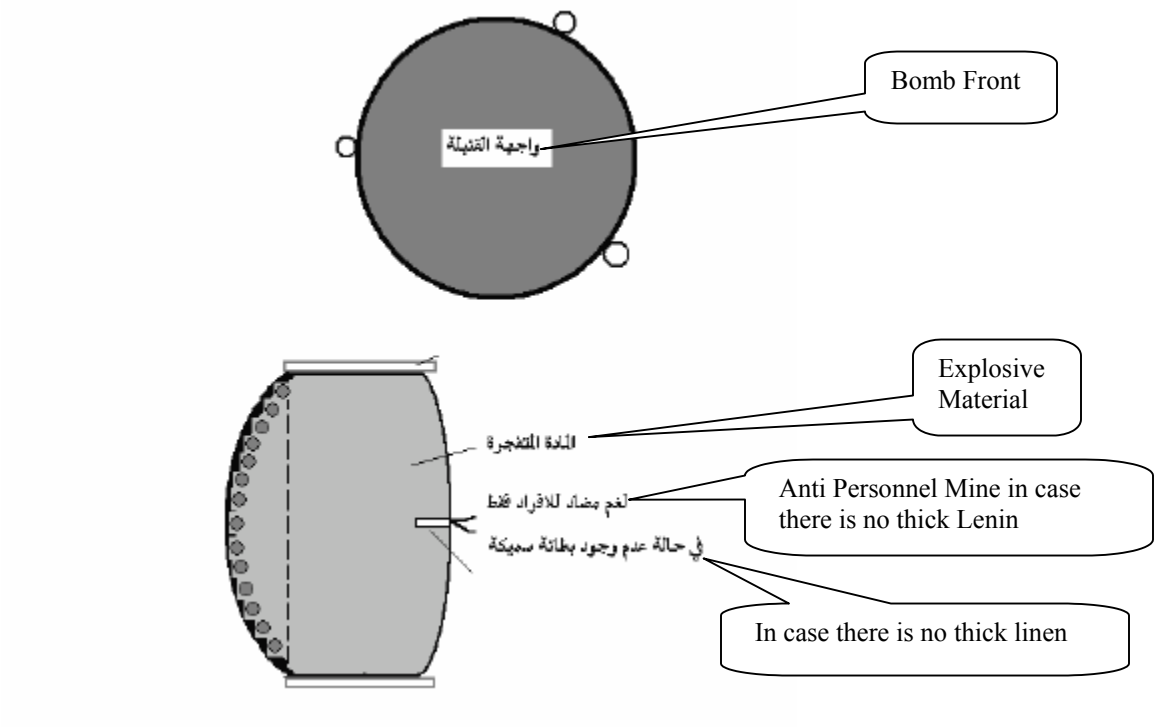

Two terminals connected to the battery
Sealed Cover
Insulated Material
Tube or Jacket
Sensitive material
Mercury Fulminate
Thin wire made of chrome and nickel
Tin
Wool - Cotton
Electrical Detonator

Figure 4



In the Name of Allah, Most Gracious, Most Merciful
Prayers and peace be upon the messenger of Allah.

I put before you some questions and personal subjects that appeared about the explosives, and considering the answer to each question might lead to another new question. I did not try to arrange these questions, so please forgive me. I ask Allah the sincerity and acceptance, and my thanks to Allah.

I have few questions and please answer them.

1. How to obtain the sulfuric and nitric acids and how to concentrate them to make them ready for mixture s?
2. How to obtain potassium chlorate, how to use the fertilizer, and what kind?
3. What is the TNT mixture (blend) and how do you make it in detail to avoid making mistakes?

I need information on detonators and how are they made?

What is the inducing material, and how do you make it?

Peace on you.
Please direct me on how to obtain the following materials or how to prepare them?

1. Formaldehyde
2. Lead nitrate
3. Sodium nitrate
4. Sodium azide
5. Ethylene bi methyl
6. Toluene
7. Lead oxide
8. Methanol alcohol

---

9. Sodium hydroxide
10. Ammonia hydroxide

Thank you

What are the components of the detonator?
How do you detonate it by battery, and what is the smallest size of battery or detonator?
Preparing the mercury fulminates for detonators.

Preparing the ammonium nitrate form nitric acid and ammonia

Making acetone peroxide

Explosive special
Please of those brothers who have knowledge or suggestions to help me do this experiment:

When I put oxygen water 9% concentration with the acetone sold in pharmacies, and has 100% concentration. I started adding the 98% concentrated acid. Nothing changed despite of the mixture's temperature was 5^{o} Celsius and I kept the mixture in an ice bath for 12 hours. When I checked it, I only found particles (granulates) that look like cotton floating on the mixture. I did not see any deposit. I tried to ignite it, but nothing happened.
Please inform me with your suggestions.
What is the likelihood of mistakes?

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Also when I added the acid and nothing happened, I added to the required amount from 2.5% to 5%, and I did not see any changes of the mixture.

Need a new way for the Urea explosive.

Need to know a way to double the Urea explosive power.

How do you distill the hydrogen peroxide?

Astrolite explosive

Does the Islamic resistance use this explosive which is said has the highest liquid detonation in the world, and supersedes the TNT by 3 times in power and can be used as a mine by casting it on the ground? In this case, the atmospheric conditions do not affect it, and every 30 grams of it is capable on killing a human being, or remove the leg because it explodes in the upward direction.
I have a way of making it, but I don't know the anhydrous hydrazine material.

Is nitro urea explosive more powerful than TNT?

How do you prepare the potassium and sodium chlorates?

How do you prepare the black gunpowder?

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for making mines?

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I have few questions; please answer them.

1. How do you get the sulfuric and nitric acids, and how do you concentrate them to have them ready for mixtures?
2. How do you get the potassium chlorate, and how do you use the agricultural fertilizer in mixtures, and which one of them?
3. What is the TNT mixture and how do you prepare it in detail to avoid mistakes?

The sulfuric acid is the battery water and can be concentrated by heating and using a glass container until you see a white evaporation and its volume reduced to approximately 2/3. The nitric acid is hard to obtain especially in Palestine, but you can prepare it form the potassium nitrates and the concentrated sulfuric acid. The TNT is trinitrotoluene and can be prepared by the mixture of sulfuric acid and nitric. Getting the toluene is becoming impossible especially in Palestine and the TNT is bought ready in a solid shape and is not prepared in Palestine. Its color is kind of wavy yellow similar to the marble. It is used in packages and shells by melting and pouring it in the needed shape, and then a detonator is placed into it. It is known that TNT is the safest explosive, and don't detonate by flame, but it needs a detonator. Its blasting speed is 7000 m/s if pure. The potassium chlorate can be obtained from the matchsticks and the fertilizers used in the mixture are the potassium and ammonium nitrates. They are used in making gunpowder and propellant materials for rockets by adding sugar, charcoal, and sulfate in specific percentages. The urea fertilizer is used in preparing the explosive of urea nitrate by adding the nitric acid and water to it. Brother Abu Saqr wrote about several methods to make it.
God is the master of success.
Your brother
Abu Mos'sallam

Salaam to you Abu Mos'sallam
You can obtain the potassium chlorate from the matchsticks only, and by cutting the red head.

You can obtain the potassium chlorate from the fertilizer, and we use the particles as is. What about the ammonium nitrate and the fertilizer? Can you provide me with the best way to make black gunpowder?
When do you say sugar and charcoal, do you mean the same sugar used at home, and the charcoal sold in regular stores?
Do you trust the posted information as a supervisor, and what is your evaluation regarding the forum, information, and the participants?

Brother 1100. This is the black gunpowder

4. How to make the black gunpowder
It has a shiny black color. It had a shape like the pins' head, and affected by external factors like a fire flame or a heat source. It burns in the air making a flickering irregular flame with changing speeds. It makes a resound blast if restrained. It can be obtained from the rifle bullets or firecrackers (pyrotechnics), and can be made.

Needed Materials
1. Potassium nitrate
2. Yellow agricultural sulfate
3. Soft vegetal charcoal

The equation:
75 grams of potassium nitrate
12.5 grams of soft vegetal charcoal

Other equation:
75 grams of potassium nitrate
15 grams of yellow agricultural sulfate
15 grams of vegetal charcoal

1. Put 12.5 grams of agricultural yellow sulfate in a plate.
2. Weigh 12.5 grams of vegetal soft charcoal.
3. Weigh 75 grams of potassium nitrate, and add them to the plate with the sulfate and charcoal.
4. Blend the mixture very well until it becomes homogeneous.
5. Bring a medium size frying pot and put little warm water in it, and add the mixture from the plate.
6. Place the pot on the fire until you see bobbles forming and coming out of the mixture.

7. Leave the frying pot on the fire for five minutes.
8. Bring a filter and put white gauze in it.
9. Pour everything in the pot through the white gauze.
10. The black gunpowder particles will settle on the gauze.
11. If the particles stuck together, add water from the faucet, and pour them again through the filter and gauze for filtration.
12. Take the particles and place them in the sun to dry after you squeeze the cloth to get rid of the largest amount of water.
13. Keep the gunpowder away from any heat sources while storing. You should know that it does not need a detonator to blast it. It needs a little flame to make a flicker burn in an open air, and detonates if placed in a sealed tube or retort.

The charcoal is usually has a regular nitrate, and used for agricultural fertilization as well as the yellow sulfate.
Most of the subjects available in a military affair are correct.
You need an expert to continue your experiments.
It does not matter how easy the material is; the danger still exists.

I need information on detonator and how to make it?
What is the inducing material and how do you make it?

The detonator makes a spark to ignite the inducing material like the gunpowder, benzene, acetone, or highly flammable materials.
To generate the spark, it can be electrical (which is the easier way), and therefore by putting a thin wire (coil) that illuminates when a sufficient electrical current passes through it. You can get the electrical current from a citric batteries like car batteries or similar where it should have a high amperage or

a dry battery similar to the light charger, or if you want a smaller size, you can use the home wireless battery, which is capable to illuminate the coil if fully charged. You can connect the batteries and coil in series with an electrical switch that makes the coil to make the flame capable to ignite the inducing material.
It can be dynamic by using chemical materials (like matchstick head or others), and by placing enough amounts in a metal pipe that have lateral openings to let the spark exit from them, and has a cylindrical spring, which is made locally. Pressing it causes friction and releases the needed spark to ignite the inducing material.

Salaam to you
Please direct me on how to get these materials and how can I prepare them?

1. Formaldehyde
2. Lead nitrates
3. Sodium nitrates
4. Sodium azide
5. Ethylene bi methyl
6. Toluene
7. Lead oxide
8. Methanol alcohol
9. Sodium hydroxide
10. Ammonia hydroxide

Thank you

These materials are available in the chemical stores and laboratories.

1. Formaldehyde is used for mummification, maintaining the dead bodies, and for sterilization. Therefore, you can find it in hospitals and biology laboratories.
2. I don't know how to use the lead nitrate, and it might bring suspicion.
3. The same thing for sodium nitrate.
4. Sodium azide is used in pharmaceutical industries, and can be available in medical factories. It is very dangerous.
5. Ethylene bi methyl is available in laboratories and used as an organic solvent.
6. Toluene is an organic solvent and might bring suspicion.

7. Lead oxide is used in making glass.
8. Methanol alcohol is an organic solvent and available in laboratories. It is poisonous.
9. Sodium hydroxide is available at the fragrance and industrial stores. It is called firewater, and used in different industries like soap. It is available and cheap.
10. Ammonia hydroxide is available in laboratories and called ammonia. It is used to wake up the unconscious person. It is available in pharmacies and in laboratories, and used for hair coloring.

In the name of Allah, Most Gracious, Most Merciful
How and what are the materials needed to make a detonator?
How do you detonate by using a battery, and what is the smallest size of a battery or a detonator?

To make an electrical detonator, do as follows:
Need:
1. Cylindrical tube on any materials
2. 6 volts flash light
3. Electrical wire
4. Heat sensitive material like all kinds of fulminates
5. 6 volts battery

Process:

- Seal one end of the pipe and fill it up with the sensitive material.
- Weld by using a tin the electrical wire on the light bulb. It should have positive and negative ends.
- Bring the bulb and break the glass. Keep the tungsten wire in good shape.
- Insert the bulb to the other end of the tube and stick it by using a substance similar to the one used to glue the iron.
- Connect the two ends of the electrical wire to the battery. The tungsten wire will light up, and the detonator will blast.
- The size of the battery is not important. Any battery that lights up the lamp will be good.
- The size of the detonator is related to the size of the package.
- The detonator is very dangerous during preparation and must deal with it cautiously.

In the name of Allah, Most Gracious, Most Merciful
Preparing mercury fulminate for detonators

Preparing mercury fulminate
The equation:
5 grams of mercury
35 ml of nitric acid (70% concentration)
50 ml of ethylene alcohol (medical alcohol) (96% concentration)

Preparation Process:

Process of Preparation

1. Put 5 grams of mercury in a glass container and add 35ml of nitric acid to it. Leave it until it reacted and melt the mercury in the acid, and making mercury liquid that has a green olive color where it needs 45 minutes. Be careful of the poisonous evaporated smoke, and it is better to cover the container.
2. Put in another container (glass) 50 ml of alcohol (white alcohol), and then add the mercury solution to the alcohol and not vice versa to avoid the evaporation (scatterings).
3. Leave the mixture for a while to complete the reaction. The reaction is severe, produces a white gas at a high density, and very poisonous. Be careful of it, and the area has to be well ventilated.
4. Leave the solution until the end of reaction. You will see a gray or little orange substance settle in pins shapes, and looks little shiny. It is the mercury fulminate.
5. Bring a cone that has a white cloth or paper filter, which is better because the fulminates are very soft and part of it might leak when using the cloth. Pour the solution into the cone, the deposit will stay in the filter, and then we wash the fulminate by water until the traces of acid disappear form the fulminates. The preferred process to do the washing is to bring a glass container, place the fulminates in it, and immerse it in water. Then, wash it again and again. Add a spoon of sodium bicarbonates to remove the traces of acid completely, and dry them to become ready for use.
6. Take the deposit and leave it to dry at the room temperature. Keep it away from any heat sources.

- Nitric acid causes a skin infection if it touches the skin; therefore pour cold water immediately on it.
- All smokes are poisonous and avoid inhaling them. Use medical masks to avoid inhaling the smokes.
- If you add the alcohol to the solution, it will evaporate in the air; therefore pour the solution to the alcohol and not the opposite.
- If the temperature increases during the reaction of the last stage, and the yellow smoke ignites, cover it gently by using a paperboard or a solid cover to prevent the oxygen from getting in. It will be extinguished, and don’t worry about the explosion during the preparation.
- Be patient, concentrate, and don’t expedite the preparation process.
- Don’t keep the fulminate in a copper container because it will convert into a copper fulminate and will be damaged.

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Preparing the ammonium nitrate from the nitric acid and ammonia

Ammonia is a liquid substance and available in hospitals, pharmacies, and chemical stores. It is used for hair coloring and to stimulate the unconscious. It has a distinguished and strong smell. Its chemical name is (ammonium hydroxide).

Needed Materials
500 ml of ammonia (10% concentration)
150 ml (approximately) of nitric acid (60% concentration)

Preparation Steps:

1. Put the ammonia solution in a glass container and place it in an ice bath.
2. Add the nitric acid gradually and carefully with continues stirring by using the thermometer.
3. Make sure the temperature doesn't rise very high (for example: more than 40^{o} Celsius)
4. Continue adding the acid and monitor the color of the litmus in the solution. When the color changes from blue to red, stop adding the acid regardless of the added amount because the above measurements are approximates.
5. Check the solution, and if still acidic, add a little ammonia to balance it.
6. Evaporate the solution. When the ammonium nitrate settles, move it from the fire and dry it under the sun to get rid of moisture.

Observations:

1. The ammonia smell is very strong and damaging; therefore avoid smelling it, and prepare it in a well-ventilated area.
2. If you have higher concentration of ammonia, you can dilute it by using distilled water until it reaches 10%.
3. The amount of ammonium nitrate from the pervious measurement is approximately 100 grams or more.

Making Acetone Peroxide

Making the acetone peroxide
Materials:
Acetone
Oxygen water
Citric acid (citric salt)
You can use the nitric acid instead of the citric acid

Making and Percentages
Percentages:
Acetone: about 50 ml or 100 ml
Oxygen water: 50 ml or 100 ml
Citric acid: 5 grams or 10 grams

Preparation Process:

- We put 50 ml of acetone in a glass container.
- We add 50 ml of oxygen water.
- After measurement, we add it to it the acetone.
- We add 5 grams of the citric acid to the acetone mixture and oxygen water.
- We leave this mixture for a reaction at a normal temperature, and should not exceed 35^{o} Celsius for three hours.
- We get the settled substance, which is white crystals and looks like a snow.
- We bring a white cloth and place the deposit in it; then we wash it under the regular water, and repeat the process for three times. We use the reaction container for that.
- We leave it until it dries.
- After dryness, the material becomes very sensitive like a powder and should not be exposed to a direct sun.

Physical Characteristics:

1. It melts in benzene, toluene, acetone, chloroform <HC_2-O-C_2>, ethyl ether, and ether petrol. Ignition degree [(Ch_3) $2COO_3$] according to 196-197 Kester, and according to 210-220 Fezgrtald.
2. Acetone peroxide evaporates. It doesn't evaporate without a dissolve during the charging, or even exposure to an open air.

At 30^{o} of air, it looses 1.5 grams of its weight within 2 hours.
It is more sensitive to banging than the lead azide.
The decomposition equation during the blast is: 2.44 CO – $3CO_2$ – $3Ch_3$ H_6O_2 - 0.47 H_2 – 0.23 C_4H_4 - 0.63 C_2H_6 – 2.61 CH_4 – 0.47C – $0.96H_2O$.

According to MURAUE
The forming energy of acetone peroxide is 21.7 Mole /K C Cal
The blasting energy is 1357 KG / K Cal
The shockwave speed at the 3750-g/cm^3 density is 0.92 m/s, and at 5300 g/cm^3 density is 1018 m/s
Different experiments to prepare acetone:
3Ch3 – C – Ch3 – H2O2 HCL (Ch3) 2 COO) 3-3/2
1-0.29 – 1027 gm (TC: the equation looks like a high polymer)

Materials used to prepare the acetone peroxide:
Acetone bp – 56, b, 20+0.75 ch_3 – C –ch_3
Peroxide hydrogen (oxygen water) in 3% concentration H_2O_2
Hydraulic acid (hcl) weigh (36/36), and concentration of 99%.

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Preparation Process:

- We take 10ml of acetone by using a syringe and put it in a 500ml container.
- We add 30 ml of hydrogen peroxide (30% concentration).
- We add 2 ml of (HCL).
- We stir the mixture to blend the material for 15 minutes.
- After 15 minutes, a milky substance starts to appear, and evaporates gradually.
- Leave the container for 16 hours to complete the crystallization process, and separate the resulted substance from the acetone and water.
- There is a chance for a little increase in the hydrochloric acid that is added to it 1.0 ml for every 10ml of acetone, which makes it go back to the lower concentration of hydrogen peroxide. The resulted substance is dried at 22^{o} Celsius, which evaporates quickly. The substance is washed after that, dried completely, and pressed during the filtration by a non-metallic pencil.

Regarding Explosives
Please of those brothers who have knowledge or suggestion to help me with this experiment:

I put the oxygen water (9% concentration) with the acetone, which is sold in pharmacies and has (100% concentration), and then added the acid (98% concentration). I did not see any changes despite of the used temperature for the mixture (blend) was 5^{o} Celsius and I kept the mixture (blend) in the ice bath for 12 hours. Then, I saw particles look like cotton floating, and I did not see any deposit. I tried to burn it, but did not work.
Please give me your suggestions.
What is the likelihood for mistakes?
Also, when I added the acid and nothing happened, I added the required amount from 2.5% to 5%, and I did not see any changes to the mixture.

Rescue try.
What are you exactly trying to prepare my brother?
Thank you for your reply.
Regarding the prepared material, it is the acetone peroxide.

(Um Al Abed) or (White Snow)
I conducted several experiments and none of them succeeded knowing that we in Palestine lack some the basic materials, and have shortage in the concentration of others like oxygen water and acetone.
The acetone sold here has most likely 9% concentration. Do you have a way to increase the concentration? Can it be used as is?
Keep the remaining material or change their values.

To increase the concentration of the oxygen water is difficult, but try to obtain it from pharmacies, chemical stores, or dental and medical supply store.

Dear brother:
It seems to me from your questions that you are still a beginner.
I know that you read Um Al Abed or White Snow stories despite putting the process to prepare acetone peroxide in the forum. Brother Abu Mos'sallam put that and has several safety features, and this subject is given to those who have experience only.
To know about the preparation of acetone peroxide, an expert has to be standing next to you and prepare it to you in practice, and then you see the process in your own eyes.
If the prepared amount is small too, this is not easy.
It is sufficient if you know how to prepare 50 grams of the material, and your life will be exposed to danger during and after the preparation.
If a person turns on the light of the room that is used for preparation, the whole room will explode even if the amount is small as a result of the produced gas during the preparation.
Brother, I don't advice you working with Um Al Abed especially you are still a beginner.
Try to find other insensitive materials.
May Allah help you succeed?

Hello (alhanon)
In the name of Allah, Most Gracious, Most Merciful
Brother, regarding Um Al Abed, use oxygen water (12% to 30 concentration), and you will find it available in pharmacies.

Preparation process: pour one cup of oxygen water, one cup of acetone, and ½ cup of fire water (60% concentration), and Wait a little. You will find a substance that looks like snow floating. Remove it by using a wood tool or

Plastic, and then place it in a cloth, and put the cloth on a cup and wash the substance by using ice water, and then dry it away form sun and heat.

Observation: Don't ever think of exposing the material to heat or friction.

May Allah help us with you to do the good deeds?
Death Engineer

Brother death engineer; it seems that you forgot the quantity at work, and most of this process is a simple modification.
There is a way to prepare acetone peroxide {Um Al Abed}
To make any explosive material, there are general rules and must be understood very well.

General Safety Rules:

First: First mistake is the last one.

Second: conduct the work in a well-ventilated place or outside with the presence of an exhaust fan.

Third: Provide plenty of water and it is recommended to have a water faucet in the work place because water is a good solvent to most explosive materials and acids, and sometime it stops the reaction.

Fourth: Don't prepare the whole amount at one time especially when you use the ingredient for the first time, and prepare to make large quantities.

Fifth: Put away any heat sources while making and drying the material.

Sixth: Don't keep the dry material for a long period of time because it is sensitive towards banging and heat. Also, the moisture negatively affects it. It is recommend to cover it by water, and to cover the container because the water will dry with time.

Seventh: The experiment has to be done by a person who has a scientific or academic experience, or has already made this kind of material more than once.

Eighth: Provide first aid materials (gauze, burn ointment, headache medicine, extinguisher, and bag of sand)

Ninth: Containers must be washed and dried before any use.

Notice: Before doing any work, you must do the following:

1. List the needed tools to do the work.
2. List the needed materials (substances) to make the mixture.
3. List the steps and number them.
4. Read the experiment more than once, understand it very well, and know all details.
5. Every previous step needs to be marked with a sign and by using a light color.
6. All tools and material need to be available before starting the work.
7. Follow the instructions and steps word by word, and don't move to other steps unless you are completely done with the previous one.

Needed Tools:

1. A notebook to write observation on it.
2. 2 (300-600 ml) marked glass containers.
3. 1 (100 ml) marked container.
4. Thermometer.
5. Glass straw or dripper.
6. Filter papers.
7. Large container.

Needed Materials:

1. Sulfuric acid (H_2SO_4) with an acceptable concentration and it is used in filling up the cars' batteries. To increase the concentration, we boil it a little until we see white vapors.
2. Oxygen water H_2O_2, which is used as a disinfectant and also used for dying the hairs. It is available in pharmacies and women hairdressing saloons.
3. Acetone, which is used as a nail polish remover and available in pharmacies and hairdressing salons. It is available in the industrial area in Rammallah (TC: Palestinian West Bank territory), and within the security rules (indirectly).
4. Ice, salt, and water.

   Observation: when buying large amounts of the needed materials, use a good cover, disguise, and fake names.

   Percentage of used substance (by volume and not by weight):
   Oxygen water: 1 (35% concentration)
   Acetone: 1 (70% concentration)
   Acid: (2.5-5%) of the total mixture. (70% concentration)

Work Process:

1. Mix 50ml of acetone with 50ml of oxygen water in a glass container and stir them carefully (it is not important which one is poured first).
2. The resulted mixture is cooled off by putting the container in a larger container that contains ice and salt with a little water where it keeps the temperature under 15^{o} Celsius, which is preferred and must not exceeds 50^{o} Celsius. If there is a problem that causes the increase of temperature, you can add cold water to the mixture.

Observation: because the internal container is light, we have to secure it and to make sure it is stable inside the larger container on the side and not in the center (to avoid flipping within the larger container).

3. Add at the beginning 2.5% of the total mixture (sulfuric acid) gradually with stirring and paying attention to the thermometer where we have to keep it at 15^{o} Celsius as much as possible. If increased a little, we need to wait a little bit then stir to cool it down and so on. We add the sulfuric acid, we need put drops gradually away from your face and it preferred to have glass cover above the danger area. Adding the acid gradually to avoid scattering the acid when in high concentration.

Observation: If the acid concentration is very high and caused some scatterings during the mixing, we work on diluting the concentration by pouring the acid on water (and not vice versa)

4. Leave the resulted mixture 9-12 hours to deposit a white material that looks like a snow (above the Acetone Peroxide).

5. We filter the deposit from water (we don't need the resulted water when washing or filtering), and then we wash it by cold water through putting water filter on a container, and pouring the deposit until it is completely filtered. Then we add the cold water more than once until the taste of acid is completely gone from the resulted water. (We know that by putting a sunflower (litmus) paper, or putting drop of water on the tip of your finger and tasting it after washing the deposit at least three times. (We keep washing it until the acid taste is removed).
6. For the large amounts, you can use any cotton cloth to wash the deposit by putting the deposit inside it, tie it up to the faucet, and pouring water into it until we get rid of the acetic. We make sure of the acid removal by following the previous step.
7. We dilute the deposit by spreading it before it dries forming small chunks in order to easily work with it.

Observation: When spreading the material, you must adhere to the following rules:

a. Use a wood spoon where its front is directed towards the material, but is should be directed to the side (lateral).
b. The hand spreading the substance has to be far from the substance, where the arm should not be above the substance, but you can go to the other direction, or turn the material to your side.
c. Keep the face away.
d. The substance at this status is very sensitive to ignition and also reasonably sensitive to hitting (banging). This makes the materials ready for use after dryness. (Ready for blasting by using any ignition, impact, or adding acid to it).

Observation: It is recommended to fill the substance in plastic bags to avoid scattering of falling on the edges of containers, and to make sure none of the material fell on the ground; otherwise you need to remove it by wiping it out with a wet cloth.

- At the sixth step and after that step, we make sure that only one person is conducting the work.
- It is preferred to use the material directly within one or two days, and has to be away from any heat sources.

Observation: You can use plastic containers during preparation when you prepare large quantities. You can use a large measuring cup or bucket.

General Rules:

1. Wear during the preparation a loose white dress (it is preferred to use safety eye glasses especially when pouring the acid to the mixture or water), also you need a nose mask
2. Be very careful and don't put your face near the container that has the reaction.
3. Don't taste the materials involved in the reaction.
4. Be very careful when dealing with the chemical substance, and don't breathe in general any chemical vapors. If you have to that when dealing with simple cases, you can move the produced air by hand, and then breathe gently away from the area.
5. Wear gloves during the preparation because the oxygen water used for hair coloring might causes a slight burn to your skin, converts the color to white, and will take a while to disappear. This is a crime indicator.
6. If you feel dizzy, go out and breathe fresh air, and wash your face with water.
7. It is recommended to drink coffee during the preparing in a closed placed and especially if you are preparing large amounts.
8. If you feel of vomiting, you can drink cold milk in this case.
9. When preparing large quantities, the mixture volume should not exceed 14 letters for each one. This is of course after making the experiment on the main ingredient by using small amounts (100 ml mixture).
10. If any of these chemicals touches your face, hands, or your clothes; immediately use plenty of cold water.

Calculating the Deposit Amount:

- To avoid making larger or lesser quantity for the needed, you do a simple calculation to determine the needed amount to extract the deposit (explosive substance).
- 100ml of the mixture (50ml acetone + 50 ml oxygen water) gives in its ideal case 25 grams of explosive material (white snow).
- In other way:

  Every 100ml of mixture gives 25 grams of a white snow (explosive material).

  Assume we need to prepare ½ kilogram (500 grams) of explosive material. What is the volume of the mixture?

Solution: We can say 100ml of mixture gives 25 grams and X gives 500 grams.
X = 500 x 100/25 =50000 / 25 = 2000 ml of mixture.
This means 1000ml (1 letter) of acetone and 1000ml (1 letter) of oxygen water.
In the contingency time, we calculate that for every 100ml of mixture (blend), gives 15 grams of deposit, and to void shortage, we can say:
100ml of mixture gives 15 grams
X gives 500 grams
X = 100 x 500 / 15 = 3333 ml approximately = 3.3 letters mixed.
➔1666 ml (1.6 letters) acetone
And 1666 ml (1.6 letter) oxygen water

➔1666 ml (1.6 letters) acetone
And 1666 ml (1.6 letter) oxygen water

Another example: What is the required amount of the main ingredient to make 3KG of white snow (explosive material)?

Solution: 100 ml of mixture (blend) gives 15 grams of white snow.
X = 100 x 2000/15 = 1333 ml of mixture (blend) = 13.3 letters
➔ 6666 ml (6.6 letters) of acetone; and approximately 6666 ml (1.6 letters) of oxygen water
To calculate the amount of acid needed, we follow the same procedures with the knowledge of the amount of needed acid is 2.5% of the mixture volume. This means, every 100 ml needs 2.5 ml of acid.

Example: Calculate the amount of needed acid to prepare 13333 ml of the mixture?
Solution: 100 ml of mixture (blend) needs 2.5 of sulfuric acid H_2SO_4
13333 needs X
X = 13333 x 2.5 /100 = 333 ml of acid (approximately)

This is the common process for experts.
The concentration of oxygen water is 30%, acetone 70%, and acid 70%. This is the safe way, but we repeat and remind you of the severity of danger because it is for experts only. If you want to experiment, you need to have an expert standing next to you that can teach you practically the process. God is behind our intention.
Your brother
Abu Mos'sallam
Thanks to the martyrs' beloved, brother Abu Saqr, and to the brothers at the weapon battalion location.

New Way to Prepare the Urea Explosive

Needed Materials

600 grams of urea fertilizer
1 litter of distilled water
1 litter of nitric acid (at least 35% concentration)

Tools

- Thermometer with at least 100^{o} Celsius
- Aluminum container
- Wood spoon for flipping

Process

We dissolve the urea in the distilled water. We place it on the fire in an aluminum container and stir (safety issue). We add the acid and stir. We try to keep the mixture temperature below 85^{o} Celsius, and in this case recommended to stir by using the thermometer. The urea is left after pouring the acid for five minutes at 85^{o} Celsius.
After that, we leave the mixture for 24 hours in a plastic container. Then, we filter it by using a cloth and pour it into 1 litter of very cold water; and then we filter it again, and dry it in the sun. It is expected of the deposit to be 600 grams of a material that has a pale white color, and has the shape similar to the fish skin. If the crystals got together and became like a rock, try to break it by using the wood spoon. It will scatter and then take the fish skin!

Material Characteristics

- It needs a powerful detonator
- Safe
- Is not affected by flame or bang
- Iron metal is used with it only through insulation
- The best result to have a powerful blast is through the use of a series detonation of fulminate + RDX + Pure TNT, and to put a large amount of the inducing material around the detonator inside the package, and let it be about 5 to 10% of the volume of explosive material (urea).

God bless you.

A process to double the urea power!!

Needed materials:

1. 20 grams of dry urea explosive that is prepared in the known way (distilled water + urea fertilizer + nitric acid).
2. 30 grams of concentrated sulfuric acid.
3. 100 ml distilled water.
4. Medical alcohol (ethanol).

Preparation Process

1. Mix 20 grams of the urea explosive (urea nitrate) with 30 grams of concentrated sulfuric acid at the 0^{o} Celsius, and blend them well with the (Halibi Al Qawam) mixture.
2. Add 100 ml of cold distilled water and the mixture will look like yogurt.
3. Filter it and place it under the sun without a wash.
4. When it becomes like dough (and before it completely dries), put it in a glass container.
5. Add to it the medical alcohol (ethanol), and boil it with a continuous stirring, and continue to add hot alcohol until the urea nitrate is melted in the alcohol.
6. Cool it off in an ice bath until you notice the appearance of crystals. This is the pure explosive (Urea Nitrate).
7. Filter it and wash it by cold alcohol.
8. Dry it under the sun.

The Characteristics of Nitro Urea:

1. Water-soluble white crystals.
2. Melting temperature 146-150.
3. Can be stored for several years in a sealed container.
4. More powerful than TNT (same power of nitroglycerine)
5. Needs an inducing material and a detonator.

How to filter the hydrogen peroxide?

The principle of filtering hydrogen peroxide is built on the principle that the water H_2O evaporates at an equivalent atmospheric pressure equals to ten times the evaporation of hydrogen peroxide H_2O_2.
To make a simple apparatus and filter the hydrogen peroxide H_2O_2, we need the following:

- 2 thick flasks to handle the release of pressure. The first one is 1 litter and the second is (½) litter.
- Small in diameter and thick plastic pipe (about 3 meters).
- Rubber covers the seal the glass bottles.
- Small compressor similar to the one used in refrigerator.
- 50 Watts light bulb to heat up the large flask to 40^{o} Celsius.

Installing the Device

- We puncture the rubber cover of the flask to make a hole sufficient to allow the plastic tube to go through it.
- We make two holes in the cover of the large flask.
- We connect the two bottles by the plastic tube.
- We connect the compressor from its air sucking end with the other hole of the large flask.

Distillation Process

- We put the less concentrated peroxide (10-35%) in the large flask.
- We fold part of the tube near the small flask and place it inside a container that has water and ice to condense the evaporated steam.
- We turn on the bulb and point it toward the large flask that contains the peroxide.
- We operate the compressor to suck out the air from the flasks and to reduce the pressure.
- The water will evaporate from the peroxide, go through the plastic tube, and will concentrate when reaching the small flask.
- We continue with the process until the evaporation almost disappears.
- The hydrogen peroxide (98% concentration) remains in the large flask. The small flask will have water and traces of peroxide.

To see the designs, go to this web site:

http://webhome.idirect.com/~earlapcp/Reports/Stills_199x.html

Do you have the manufacturing process?
Mujahid brother, do you have a barium carbonate?

Yes brother, I have the material, but why are you asking? I did not understand you.
Salaam

It can be used to prepare the hydrogen peroxide.
First step; It is heated on a low fire (with good flipping) for a sufficient time until it converts to barium peroxide.
The barium peroxide is then added to the sulfuric acid to give a sulfuric barium (deposited) and hydrogen peroxide.
I don't know the effect of this process and I did not try it.

Astrolite explosive

Does the Islamic resistance use this explosive which is said it has the highest liquid detonation in the world, and supersedes the TNT by 3 times in power, and can be used as a mine by casting it on the ground? In this case, the atmospheric conditions do not affect it, and every 30 grams of it is capable on killing a human being, or remove the leg because it explodes in the upward direction.
I have a way of making it, but I don't know the anhydrous hydrazine material.

Pour what have, you will get the astrolite will appear.

Dear brother Keka (TC: it is a nick name). Peace and mercy of Allah be upon you.
Regarding the astrolite and according to my knowledge, it is used by the resistance. It is a mix of two explosives, which are ammonium nitrate and hydrazine (Astrolite G). There is also Astrolite A, which is stronger than the other, and can be obtained by adding 40 grams of aluminum powder to the previous mixture.
Regarding the hydrazine; it is an explosive material, poisonous and very dangerous. It can be prepared from the ammonium hydroxide, water, and gelatin. It could be replaced by ammonia, glue, and sodium chloride.

The result gives us anhydrous hydrazine. To concentrate that, add 144 grams of light hydrazine with zellin, which is a chemical substance used in making glues, and the distillation can be made in an area that have nitrogen and this produces a distilled hydrazine. By the way, if you smell the substance in a closed environment, this will cause an immediate death. Be extremely careful about it "Keka".
Please contribute with your knowledge, which will benefit us with something new.
May Allah benefit the Islam and Moslems through you?
Peace and mercy of Allah be upon you.

May Allah reward you very much "Mobile"?
Regarding the making of Astrolite, there is a simple mistake (I think it is a typo and not that important), which is the used material is not sodium chloride, but sodium hypochlorite used in making Clorox (the raw material and not the ready one).

This way is not practical because of the difficulty in distillation under the nitrogen, and the distillation without that causes the explosion of mixture. In general, whoever has the capabilities for manufacturing; I have the detailed process with the conscious about the danger of the hydrazine (Dangerous material).
There is another way that might succeed (I was planning to test it, but I changed my mind). It is summarized in converting the light hydrazine produced in the described above process to hydrazine sulfates by adding the sulfuric acid, then dried and mixed with calcium nitrate [agricultural fertilizer and can be obtained by mixing the nitric acid with calcareous (jeer)]. The calcium sulfates will deposit and the hydrazine nitrate remains (which is the Astrolite).
But, the important thing that astrolite is the most powerful explosive, and has a problem in its density. Its density is very small, therefore the two packages of the same size, one of the TNT, and the other Astrolite, will not the make any advantages of the astrolite (because it will be lighter and therefore will be similar to TNT in term of effectiveness). Therefore I don't thing the use of Astrolite will give a big benefit.
There are better mixtures such as 20% of aluminum powder with 50:50 mixtures of TNT and waxed RDX, which is consider one of the strongest mixtures at all.

In the Name of Allah, Most gracious, Most Merciful
Dear beloved brother, the Jews defeater. Peace and mercy of Allah be upon you.

Please send us your processing way of astrolite and mention in detail the process for the last mixture, which you said the strongest one. Please write the accurate percentages.
God bless you. You can send them to my personal mail.
Salaam to you.

First: Preparing the Astrolite
Preparing anhydrous hydrazine

Needed materials

1. 1500 ml of ammonium hydroxide (ammonia) in 28% concentration.
2. 900 ml of distilled water (must be pure and without salts).
3. 375 ml of distilled water and dissolve in it 37.5 gelatin (you can use starch instead of gelatin, but gelatin is a lot better).
4. 1200 ml of distilled water and dissolve in it 270 grams of sodium hypochlorite. Then, test the solution by using a sunflower paper and must be stilled, otherwise add a little of sodium hydroxide to stabilize it.
5. Potassium and sodium hydroxide.

Preparation Process

1. Mix all the listed solutions in a large glass container (5 litters), and then heat it quickly until boiling. Leave to evaporate until you have the 1/3 of the original amount (about 1 ¼ litter).
2. Cool off the solution and put it until its temperature reaches 2 (?), and then filter it at the low temperature twice. One time by using the cloth, and the second by using a filter paper placed over the cloth. (The goal of filtering is to get rid of blemishes, because blemishes spoil the reaction). The resulted solution is the light hydrazine.
3. Mix 144 ml of the solution with 230 ml of xylene in a filtering cask, and do the distillation under the nitrogen. In the beginning, the xylene will exit taking with it the water, and when the xylene is gone, place another cask to receive the concentrated hydrazine that will exit from the distillation cask, which is the concentrated liquid hydrazine (90%).
4. Mix 20 grams of potassium hydroxide for every 100 grams of liquid hydrazine (90% concentration), and leave the solution for 12 hours until the largest amount of water is removed. Then distill the solution to remove the potassium hydroxide.
5. Blend the resulted solution of the distillation process with similar weight of sodium hydroxide in a distillation cask, and leave it for 2 hours, and then filter it under the nitrogen. The result will be anhydrous hydrazine.

Observations:

- Distillation has to be under the nitrogen, otherwise there is a chance of explosion.
- Hydrazine is a poisonous material. You must take precautions by wearing a mask and working in a well-ventilated area, and avoid touching or inhaling the hydrazine.
- The amount of needed xylene is calculated when the concentration of anhydrous hydrazine is about 60%. Since what you have more or less of this amount, you can make experiments on small portions to know the best suitable amount of xylene.
- If the solution got contaminated in any of the stages by black color. This is resulted of the blemishes and the reaction will fail.

Second: Preparing the explosive mixture H-6
45% RDX
30% TNT
20% aluminum powder
5% wax
A little of calcium chlorate is added.

Better than perfect my brother.
May God reward you thousand times?

Dearest brother, Jews defeater: Peace and Mercy of Allah be upon you.
Thank you for your efforts. Do you know what the Xylene is? Does it have several kinds? Please explain.
Another question; did you get any new mixtures of ammonium perchlorate?
Another question; How can you obtain the aluminum powder?
Thank you and God bless you.

Brother Kika. Forget the toluene subject, and if you need a powerful explosive, use the urea. It is easy to prepare and cheap too. If you want something more powerful, use RDX. Both of them were explained to the other brother during the forum.

Brother Mobile.
The xylene is an organic solvent used in cleaning the lenses of microscope.
Aluminum powder can be obtained from construction and paint hardware stores.
For the Perchlorate, you need perchlorate acid and it is available.

Nitro Urea Explosive (More powerful that TNT)

Needed Materials

1. 20 grams of dried urea explosive, which is prepared in the regular way (distilled water, urea fertilizer + nitric acid).
2. 30 grams of concentrated sulfuric acid.
3. 100 ml of distilled water.
4. Medical alcohol (ethanol)

Preparation Process:

1. Mix 20 grams of the urea explosive (urea nitrate) with 30 grams of the concentrated sulfuric acid,

At zero temperature Celsius, and mix it very well with the Halibi Al Qawam (milky shape).

2. Add 100 ml of cold distilled water, and the mixture will look like yogurt.
3. Filter it under the sun and without washing.
4. When it becomes like a dough (and before it completely dries), put it a in a glass container.
5. Add to it medical alcohol (ethanol), and boil it (in a hot bath and not by a direct flame to avoid fire), and stir continuously. Continue the stirring and addition of hot alcohol until the urea nitrate melts in the alcohol.
6. Cool it off in an ice bath. You will notice the appearance of crystals, which is the pure explosive (Nitro Urea).
7. Filter it and wash it by cold alcohol.
8. Dry it under the sun.

The Characteristics of Nitro Urea:

1. Water-soluble white crystals.
2. Melting temperature 146-150.
3. Can be stored for several years in a sealed container.
4. More powerful than TNT (same power of nitroglycerine)
5. Needs an inducing material and a detonator.

With the greeting of the Jews defeater

Sorry my brother, this mixture is tried by another brother and failed. I don't know why? When the brother put the urea over the acid, it ignites, why?? And what is the solution according to the experts????
Salaam to you.

Solution:
Brother Mobile. When you add the urea nitrate to the sulfuric acid, it should be slowly, and the temperature should not rise more than 7 degrees at the end of step one. The reason for muddle is the air bubbles, and can leave in time, and the solution will clear. Second step: the water has to be very cold (can be crushed ice) to deposit the nitro urea. The alcohol's function is to ease the dryness and separate the nitro urea.

Brothers; who knows how to make potassium and sodium chlorates?

Brother, the Jews hunter. Get an excuse from your brothers because the Internet is disconnected from the West Bank because the server got hit.
Needed Materials:
Sodium Hypochlorite (Clorox)
Potassium chlorate; (It is available in laboratories supply stores, and in pharmacies as a substitute salt for high-pressure patients).

Process:

1. Put 1 letter of Clorox in a glass container and place it on a low fire until boiling. (4% concentration and if the concentration is higher, you need to take a balanced amount. For example, if the concentration is 6.5%, the equivalent amount is 650 ml).
2. Leave it to boil on a low fire and evaporate it until 140 ml of volume remains. (It is not important for the volume to be accurate, it might increase or decrease 10 ml, and it will not make a difference).
3. Leave the solution to cool off at the room temperature (20-25) degrees. If you notice the formation of a yellow deposit in this stage, filter the solution by using a cone and a white cloth, or filtration paper. Get rid of the deposit (it is a sodium chloride), and keep the solution.
4. Melt 28 grams of potassium chloride in separate container with less water about 28 ml). You can start with 70 ml, and then increase the water in small portions 20 ml until you melt all of the potassium chloride, and then you stop adding the water.
5. Add the second solution to the first solution gently. You will notice the formation of a deposit. This deposit is the potassium chlorates.
6. Warm up the solution to the boiling point under a low fire, and cautiously until the deposit melts. (You might need to some water, but the important thing is to melt the deposit with the lowest amount of water).
7. Leave the solution to cool off on its own. You will notice the formation of deposit again after it cools off to the room temperature. Cool it off to zero degree (you can put it in the freezer).
8. Filter the solution to get the potassium chlorate. (The lower the temperature during the filtration, the more you can get of chlorates)

9. To purify the chlorate more, you can melt it and heat it to a boiling point again (20 grams in 100 ml until it melts), then you cool it off, filter it again, and wash it in cold water. You will get a relatively pure chlorate.
10. The filtered solution from step 8 and 9 contains some amount of chlorate. You can increase the concentration by boiling, vaporizing, and filtering it again. Or just get rid of it.
11. The chlorates are dried from water by placing them in 100 degrees oven for a ½ hour, or by hot air from the hair dryer, and with cautious.

Important observation: when the chlorates form (step 5), test the solution by using a sunflower paper. It should not be acidic because it is very dangerous. If acidic, add a little of potassium hydroxide until it get balanced.

It is better if you can use distilled water.

Salaam to you.

How to Make the Black Gunpowder:

The color is a shiny black. It has the shape of the needles heads, and affected with any outside factor like a flame or heat sources. It burns in the air in a flickering and irregular flame, and in changeable velocity. It will explode in a resound way if restrained. It can be obtained from bullets and pyrotechnics shells. You can prepare it.

Needed Materials:

1. Potassium nitrate
2. Yellow agricultural sulfate
3. Soft vegetal charcoal

The Equation

75 grams of potassium nitrate
12.5 grams of the yellow agricultural sulfate
12.5 grams of soft vegetal charcoal

Another Equation

75 grams of potassium nitrate
15 grams of yellow sulfate
10 grams of vegetal charcoal

1. Take 12.5 grams of the yellow auricular sulfate and put in a bowl.
2. Weigh 12.5 grams of the vegetal-grounded soft charcoal.
3. Weigh 75 grams of potassium nitrate and add them to the bowl that contains the charcoal and sulfate.
4. Bold the mixture until it becomes homogeneous.
5. Bring a medium frying pot and put some hot water in it, and then add the mixture to it.

6. Place the pot on the fire until you see bubbles forming, and coming out of the mixture.
7. Leave the frying pot on the fire for five minutes.
8. Bring a filter and put white gauze on it.
9. Pour everything in the pot though the white gauze.
10. The black gunpowder particles will settle on the gauze.
11. If the particles stuck together, add water from the faucet, and pour them again through the filter and gauze for filtration.
12. Take the particles and place them in the sun to dry after you squeeze the cloth to get rid of the largest amount of water.
13. Keep the gunpowder away from any heat source while storing. You should know that it does not need a detonator to blast it. It needs a little flame to make a flicker burn in an open air, and detonates if placed in a sealed tube or retort.

The process to make an explosive package of Black gunpowder:
Percentages: 1 volume of black gunpowder
0.5 volume of aluminum powder
The percentage is one to two, or 100 grams of black gunpowder.
50 grams of aluminum powder

- We use the aluminum powder because it retains the temperature of the formed gunpowder during the ignition.
- The black gunpowder is not considered as a moisture attracter because of the presence of vegetal charcoal and yellow sulfate as a part of its components. But, if it has moisture and exposed to the sun, it will return to its initial characteristic.
- You can obtain the black gunpowder from pyrotechnics (fire works).

How to obtain the potassium nitrate?
This is very important substance that is included in the compound of many of the powerful popular materials. It is a good material, and we can get it from the essential nitric acid, which is done by treating it with the sulfuric acid and using a distillation apparatus. The process is already explained.

- Potassium nitrate: it comes in a white salty shape, used as a land fertilizer, in making glass, forming and softening steel, meat reservation, cooling, making explosives and fire mixtures, and has many names like the Chilean salt, etc.

Fire Works (pyrotechnics)
It is a material that is rich in pure gunpowder.

- Fire works are available in the markets in different kinds, shapes, and names.
- One is called the mortar, which is a carton projectile and has 12 bombs with it, or different shapes of mortars. Also, the rockets, which are the best in quality.
- Rockets have several colors and shapes. The best one has the orange color.
- It is important that you buy the large sizes, and even the small ones contain gunpowder, but working with them requires time.

How to do the work? Buy a box cutter and pliers. Remove the box covers. After the removal of the covers, you will see a substance that has multi colors like gray, black, white, and brown.

All of these colors are valid except for the brown color because it is a mud, and they put it to separate the charges to detonate the materials gradually. We don't need this substance, and we need the others.
To ensure the needed material, all we need is to take a sample by using a tablespoon of each color, and then we soften it and ignite it by matchsticks. The ignition is done several times for assurance because sometimes it does not ignite directly, so try to ignite it more than once.
The burned material is the needed one. Sometimes, there are substances that strongly ignite, and this is even better.
During the work, you will see some cords and capsules. All of them are good. Keep them because you might need them for other purposes during work.

- Take the collected substance, and soften it very good by using a wood-grinding bowl.

Characteristic of this Material:

1. It is a flammable material, and combustible when restrained in a closed pipe or sealed metal jacket.
2. It loves moisture; therefore expose it to the sun after grinding.
3. It does not need a detonator to explode, and needs only an electrical igniter. It will be better if you blast it by a detonator.
4. It is easy to work with and is not dangerous during the preparation.
5. It can be mixed with other substances like potassium chlorate and aluminum powder.

Percentages: fireworks gunpowder + aluminum powder
70% + 30% = Explosion
Or 50% + 50% = Explosion

Aluminum powder can be obtained from the polishing aluminum containers or silver polishing. It will be dried under the sun, grinded and softened, and mixed with the fireworks gunpowder, and then stuffed into a metal restraint, such as a pipe and firmly sealed from both ends. It explodes by an ignition or a detonator.
It is important to notice that the moisture spoils the black gunpowder, and should not to be used in explosive packages if you want a powerful detonation, because the explosion power of gunpowder is very weak when compared to powerful explosives. It is not essentially an explosive material, but it can explode if restrained in a sealed container, and its explosion is weak. It is mostly used as a propellant material and in mortars.

Brother Abu Hamza.
The aluminum powder is a grounded aluminum is a shape of a powder and used in explosive packages in general because it ignites and produces high temperature.
You can buy it from the paint stores as is, or inside to silver polish cans. You pour the oil from the can and the silver deposit remains. Then, it will be dried and grinded. Or you can get it from the aluminum shops.

The enlighten brother.

In the Name of Allah, Most Gracious, Most Merciful
You have to be one of the Taliban, Al Qaeda, or other person; otherwise; don't ever read it.

Necessity Precautions
The black gunpowder is used in general in the shape of soft particles, and usually used compressed to increase the density of its uprooting power in the form of molds or cylinders that have a hole to allow the passage of a detonating cord.
To prepare the black gunpowder, there are several ways to do that by using oxidizers through mixing the black gunpowder components after grinding, and without using solvents like alcohol. Here are some kinds of gunpowder according to its components:

First: without using the solvents
1. (75%) Potassium nitrate + (15%) vegetal charcoal + (10%) yellow agricultural sulfate.

The preparation process is to grind each substance independently until it becomes like a powder, and then mix them in a new container, and the black gunpowder will be ready for use.
2. (75%) of potassium chlorate + (12.5%) of vegetal charcoal + (12.5) of agricultural yellow sulfate.

We grind each material separately and gently, especially when grinding the potassium chlorates, where the grinding has to be done in extreme caution, because it is a very sensitive material against friction and heat.
After grinding the materials, we mix gently, and the gunpowder is ready for use.
3. (75%) of barium nitrate + (12.5%) of vegetal charcoal + (12.5%) of agricultural sulfate. The process is the same like the last two processes.
4. (70.4%) of potassium nitrate + (10.2%) of sodium sulfate + (19.4%) of agricultural sulfate. The process is the same as the first one.

Second: by using the solvents (ethylene alcohol + water) and heating
The percentages used in this process are the same mentioned in the first process with an increase of ethylene alcohol and water percentage. We will explain the preparation process of the black gunpowder in God's willing by using the potassium nitrates, and by taking the percentages in weight (grams), and with other materials in the same way (by using the chlorate and ammonium nitrates).

Preparation Process
Needed Percentages
22.5 gram of potassium nitrate + 4.5 grams of vegetal charcoal + 3 grams of yellow agricultural sulfate + 15 cm^3 of cubic distilled water + 65 cm^3 of ethylene alcohol (ethanol + alcohol)
Observation:
If you want to increase the amount, you can double the percentages or multiply them by a specific number according to the needed amount.
1. We grind the three substances independently and gently.
2. We mix the three substances with each other and continue to stir gently.
3. We now add ½ of the required amount of water (7.5 cm^3 with stirring

Until the mixture is blended, and then we add the remaining of the water)

4. We start now the heating process until we see bubbles coming out (we warn you by not letting the mixture boils, and keeping its moisture by stirring while heating).

Observation:
Be careful that some of the mixture is stuck at the container while heating to prevent burning.

5. After seeing the bubbles, move it from the heat, and pour it immediately over the alcohol (65 cm^3) with stirring. Then, leave the new mixture for 3-5 minutes.
6. Filter the mixture by pouring it over a piece of cloth, and then squeeze it to get rid of the liquid substances.
7. Dry the substance immediately under the sun, because the more you delay, the effective of the powder will be reduced.
8. The black gunpowder is now ready for use.

(Picture) of the particles of back gunpowder and the cloth filter

Red and White Gunpowder

This kind is used in weapons and shells as a propellant material. It can be prepared in a safe and easy way:

Fahd (TC: it is a common Arabic name), it is better from here

Needed Substances:

1. Potassium nitrate: from laboratories or prepared in labs.
2. Granulates white sugar
3. Ferrous oxide powder (you can get them from the agricultural stores), and used as a booster. It is not an important substance. If you can't find it, you don't need to do this experiment.
4. Heat source
5. Pure water

Preparation Process:

1. Put 480 cm^3 of sugar in a container that handles the temperature, then add to it 560 cm^3 of potassium nitrate, and pour 840 cm^3 of pure water to mixture.
2. Place the sugar container + potassium nitrates + water over the slow fire and stir, and mix until the mixture melts in the water.
3. Add 30cm^3 of ferrous oxide (if available), which is better for the mixture, increase the heat, and stir gently until the mixture boils.

Observation: the mixture will take the color of the ferrous oxide.

4. Continue in stirring until the mixture is reduced to the fourth of its volume and becomes heavier.
5. After the mixture reaches its fourth volume, we notice that it becomes heavier. We remove it for the heat sources and display it on an aluminum plate.
6. Expose the mixture to the sun, and stir it every once in a while to dry it completely.

7. Rub the substance part by part above the metal filter and expose it again to the sun to insure a complete dryness of granulates. Now the substance is ready for use. If you don't add the ferrous oxide, the solution color will be white.

(Picture)

Smokeless Powder (nitrocellulose)
It is used as propellant charges in some shells.

Needed Substances:
1.Medical cotton
2.Concentrated nitric acid from the labs, hospitals, lab centers.
3.Concentrated sulfuric acid

Preparation Process:
1. When the cotton is not medical, we boil it for ½ an hour in sodium hydroxide (2% concentrations), (2 cm^3 of sodium hydroxide + 100 cm^3 of pure water). After ½ an hour, we remove the cotton and wash it in hot water, and leave it until use. No need for this process if the cotton quality is medical.
2. When both acids are concentrated (85% to 98%): Put 20 cm^3 of water in a container, then add to it 250 cm^3 of sulfuric acid while the mixture container is placed in a larger ice container (ice bath). After completing the addition of acid, add 350 cm^3 of nitric acid. The temperature should not exceed 25^o Celsius. If the two acids are not concentrated (65% to 80%), you don't have to add water.
3. Add the medical cotton in small pieces to the mixture and stir it good.
4. We can get rid of the remaining acid and squeeze the cotton by using the stirring rod to remove the acid, and then we wash the particles in boiled water five times for 25 minutes. We can put the cotton in a cooking pot, and boil it for ½ an hour. If the acid trace remains, we put the cotton in sodium carbonate (2% concentration), and dry it under the sun or in room temperature, and have it ready for use.
5. Add acetone to the cotton in portions and stir it until you get a sticky mixture similar to the dough. Dry it until becomes ready for use.

Bullzai explosive, which can be highly effective and less effective where it can be prepared easily by using the smokeless gunpowder (Bullzai)

Needed Materials:
1.Bullzai (smokeless gunpowder)
2.Detonating capsule (detonator)

Usage Process
1. To use it as a low effective explosive: we pour the gunpowder into the metal pipe, and place a slow detonation cord, where the metal tube is fragmented, and the fragmentations flies with a speed of 600 ft/sec.
2. To use it as a high effective explosive: we put the gunpowder inside the metal pipe, and put it

in a detonating capsules (detonator). When the pipe explodes, it will be fragmented and sends high-speed fragmentations that reach a speed of 20000 ft/sec.

Slow Materials and Highly Explosive

It can be made from the highly flammable double base materials like the odorless powder used as a charge in gun ammunitions. It contains the sensitive material of nitroglycerin.

Sources: guns shops.

Needed materials:
1. Odorless mixture used in stuffing the gun bullets.
2. Detonation capsules or detonator, and timing valve.

How to be used as a slow explosive material:
Pour the powder in a steel pipe, sealed from one end, and then can be detonated through the timing valve (can be an ignition cord). When a steel pipe is used, it will explode to several pieces that fly at a speed of 600 ft/sec.

As a highly explosive material:
Pour the charge into a steel pipe, sealed from one end, and put the detonation capsule inside the charge and subjacent to the surface. When the pipe explodes, it will be divided into small pieces that fly at a speed of 20000 ft/sec.

Observation:
Because of the nature of the resulted mixture of nitro cellulose and double base nitroglycerin; this mixture is one of the propellant explosives that can be detonated by a detonation capsule. When it explodes, it gives powerful results, which are stronger than the TNT used for military purposes. This material can be used to hit solid and hard targets.
(Picture) = detonator with detonation cord _ steel pipe _mixture _ gunpowder.

Dust Emission Explosives:
The explosive initiator that induces an average material to produce dusty explosives can be produced quickly and safely.
This kind of explosive charge is good to dust different areas like rooms and buildings.

Needed Materials:
- Flat can (3” diameter), 1.5” height, and looks like a tuna can, which will serve the purpose.
- Detonation capsules.
- Explosive material and preferred to be plastic like C4.
- Aluminum in the shape of (sheets wire, powder, and pieces)
- 4” Large nail (10 cm)
- 6 mm diameter wood rod
- Flour, kerosene, and aluminum powder.

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Making explosives from A to Z (tested)
I put these completed processes to make explosives before you, and wishing from the almighty God to be helpful to anyone asking for jihad in the name of God, but can't find the tool or weapon, despite the targets in front of his eyes. For this reason, these ways are for those who want to support Moslems and purify the countries from the Jews and crusaders. Please of those who don't have the experience in the field, not to try any experiments. I mean by experience is, someone who studied or studying (pharmacy or labs testing preparations). I dedicate this work for anyone who says "there is no God but Allah". The reader will find these ways have several divisions, where in the fires and second division the essential materials, which by preparing them, the explosive will be easily prepared. The explosive materials prepared in the third section. Then, the electrical detonators in the fifth section that still in practice, and better than the cords in the fourth sections. I ask the almighty God to protect all Moslems from harms.
(((((The source of these processes is the jihad encyclopedia by Ibn Al Islam, God bless his efforts and protect him of any harm))))) Please of all brothers who have any materials of flyers to distribute them, because whatever you see unbeneficial, might be useful to others.
(((Contents)))
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2. Electrical detonator 26

(2)
Inducing substances (1) mercury fulminates

Percentages:
1.5 grams, 10.72 ml, 13 ml
Mercury, nitric acid, ethylene alcohol
, HNO_3, $C_2 H_5 OH$

Operation Steps:
(1)-
We put 10.72 ml of nitric acid in a flask, and we add to it 1.5 grams of mercury by using the dripper, and increasing the temperature to 55^o Celsius until it melts completely. We notice the appearance of bubbles, and also notice that the melting is fast when we increase the temperature.

(2)-
We put 13 ml of ethylene alcohol in a container and raise its temperature to 35^o Celsius.

(3)-
We add the mercury mix and heated nitric to 55^o Celsius, to the ethylene alcohol heated to 35-40^o Celsius.

(4)- After this addition, we notice the appearance of white steams.
[It is possible if the steams don't appear to increase the temperature until the appearance of steams]
It is preferred to ignite them to get red of their poison, and to expedite the experiment.

(5)-
When the mixture gets reacted, we cover the container until the ignition is extinguished a little, and then we add a little bit of ethylene alcohol.
[We notice the formation of mercury fulminate that has several colors such as silver, brown, yellow, or white]. You can wash and filter it by distilled water, and dry it in a dark aired place.

(Observations)
First:
In case of pouring the mixture of mercury and nitric to the ethylene alcohol, the temperatures have to be 55^o Celsius for the first mixture, and 35^o: 40^o Celsius for the ethylene alcohol.
In this case the white smokes appear to be very little and don't evaporate; the container needs to be heated

until the steams evaporate, and then you ignite them. If the mixture is inflamed, it can be covered to extinguish the fire, and then a little bit of ethylene alcohol is added to it.

Second:
If we raise the temperature of the mercury and nitric mixture to 60^{o} or 65^{o} Celsius, and then added it to the ethylene alcohol, we will notice a popping and splash inside the container, and then a condensed amount of a white smoke appears, which must be ignited to get rid of it. In this case the ignition calms without the inflammation of the mixture, and we add to it a little amount of ethylene alcohol. It should be filtered, washed in water, and dried in a dark aired place.

(2) Inducing Materials, Lead Azide

Percentages:
4 grams, 6 grams
Sodium Azide, Lead Nitrate
NA $N_{3,}$ PB $(NO_3)_2$

Operation Steps
First:
(1)- We prepare a 4% concentration of sodium azide solution. This means, we melt 4 grams of sodium azide in 55% ml of distilled water. (It is car battery water).
(2)- We prepare a 6% concentration of lead nitrate solution. This means, we melt 6 grams of lead in 55% ml of distilled water.
(3)- We add the sodium azide solution to the lead nitrate solution with flipping. (We notice the formation of a lead azide)
(4)- The mixture is filtered and washed in distilled water, and dried in a dark aired area.

Activating Materials
(1)- Picric Acid

Percentages
5.8 grams, 16 ml, and 16 ml
Phenol, sulfuric acid, and nitric acid
$CO\ H_5\ OH,\ H_2\ SO_4,\ H\ N\ O_3$

(1)- Take 5.8 of phenol, put them in a glass cup, add 16 ml of sulfuric acid, and flip them until you have a complete melting.
(2)- Add this mixture to 16 ml of nitric acid placed in another cup with the consideration of temperature to be raised while pouring above 50^o Celsius and to be heated for 5: 7 minutes, and keeping the temperature between 80: 100 degrees Celsius.
(3)- Pour this mixture into another cup that has more than 50 ml of cold water. (Pouring has to be in one portion and without shaking the liquid before pouring). (We notice after pouring the mixture over the water, the formation of greenish yellow picric crystals).
(4)- It will be filtered, washed in distilled water, and dried in an aired area.
Observation:
(Don't store it until it is completely dry)
Observation:
(Before filtration and after making the crystals when is left for the longest time; the crystals will form, and the melted substance will crystallize and appear. It is shown when you see the substance or the crystals separate completely from water according to their density, either above the water or below it.

Activating Materials
(2) Tetryl
Percentages:
3 ml, 50 ml, and 50ml
N, N-dimethylaniline, sulfuric acid, and nitric acid
$C_6H_5N\ (Ch_3)_2,\ H_2SO_4,\ HNO_3$

Operation Steps:
(1)- Dissolve 3ml of N, N-dimethylaniline in 50 ml of sulfuric acid, and consider not to raise the temperature above 20^o Celsius by using an ice valve and continuous flipping. [To ensure the melting process, we put a drop of the solution in water, if it gets muddy; this means the dissolving is not completed].
(2)- Add the mixture to 50ml of nitric acid in portions and make sure the temperature doesn't rise above 30^o Celsius by using an ice valve.

(3)- Raise slowly the temperature of the mixture to 40° Celsius, and then add 250ml of iced water. (We notice the formation for Tetryl crystals that have a yellowish orange color).
(4)- Leave the resulted mixture for three hours until the formation and the crystallization is completed, and the Tetryl crystals appear.
(5)- Filter the result, do the distillation and separate the acids by adding the heated sodium bicarbonates (40° Celsius and 5% concentration) to balance the solution, and you know that by using the PH paper.
(6)- The result mixture is filtered and dried completely. We have now a pure Tetryl of acids, and can become as a powder, or freeze it a little.
Observation: [During some of the Tetryl experiments and after pouring process of the (N, N-dimethylaniline) and sulfuric acid on the nitric acid, the temperature rises to 40° or 50° Celsius. It was discovered that the experiment might be good or bad. In some other experiments, it was discovered that after the end of the pouring process, the temperature doesn't rise, and you can pour a limited amount of cold water directly over the mixture and without raising the temperature. We notice the change of a sharp light orange color. It is then filtered from acid in the same mentioned process.

Activating Materials
Cyclonite (RDX)
Percentages
5 grams, 48 grams, and 57 ml
Hexamine, ammonium nitrate, and nitric acid
$C_6N_{12}N_4$, NH_4NO_3, and HNO_3

Operation Steps:
(1)- We put 5 grams of hexamine with 42 grams of ammonium nitrate in a container. (You can grind them to ease the reaction process, and grind each one of them independently).
(2)- We add to the mixture 57ml of nitric acid little by little with flipping the mixture and keeping the temperature under 15° Celsius by using the ice bath and salt.
(3)- After completing the addition, we raise the mixture temperature to 80° Celsius and keep it for ½ an hour (without flipping and without covering the container, and some brown gases might come out in one portion with a major rise in temperature).
(4)- We remove the mixture from the heat sources, put it in an ice bath, and cool it down to 20° Celsius.
Observation: the RDX crystals composed of blemishes and acids.

(5)- We add acetone acid to the resulted mixture in order to complete the crystallization and formation in case the brown steam doesn't appear.
(6)- We do the filtering, balance the result with the concentrated sodium carbonate (5%), and we know that by using a PH paper.
(7)- We heat the mixture, evaporate the water, and will get a pure RDX of blemishes and acids. It is ready for use.

(8) Explosive Materials
Trinitrotoluene TNT
Percentages:

114 ml of the first solution, second solution (?)
41.3 ml of C_7H_8 + 15.1 ml 23.3 ML +37.5ml
Sulfuric toluene, nitric sulfuric, and nitric (?)
Multiplied 12 times, multiplied 3 times

Operation steps:

(1)- We put 57 ml of the first solution in an ice bath, and we add to it 114 ml of toluene drop by drop, gradually and gently to keep the temperature under 20^o Celsius.
Then, we flip the mixture for 15 minutes.
(2)- We heat up the mixture to raise its temperature to 50^o Celsius with continuous flipping (stirring).
We add 280ml of the first solution to the mixture and raise the temperature to 55^o Celsius for 15 minutes.
(4)- We notice the formation of an oily layer on the solution. Try to obtain this layer by the dripper or cooling, or by both ways. You can cool it off by using water and ice directly on it.
Observation: After getting that oily substance, we pour the pure solution in a large container that has iced water. The substance will form, and the dissolved amount of the solution will settle on the oily layer, or a nitro toluene.
(5)- Add 280ml of the first solution to the oily liquid resulted from the last step, and raise the temperature to 83^o Celsius slowly, and keep it for ½ an hour.
Observation: the solution has to be poured to the oily layer slowly to avoid dissolving it.
(6)- Cool off the solution to 60^o Celsius and keep the temperature for ½ an hour. We will notice the development of forming a second oily layer.

(Dinitrotoluene)
(7)- Suck out the oily layer and operate with it as mentioned.
(8)- Add 161ml of concentrated sulfuric acid to the oily layer gently and slowly, and heat up gently to raise the temperature to 80^{o} Celsius.
(9)- Add 183ml of the second solution to the mixture, raise the temperature to 104^{o} Celsius, keep it for three hours, and then reduce the temperature to 10^{o} Celsius and keep it for a ½ an hour.
(10)- Wash the oily layer after you get it from the previous way by a boiling water, and then by the ice water where the TNT (trinitrotoluene) will harden.
(11)- You can purify the TNT by using 15 grams of sodium sulfate solution + 1.5 grams of sodium carbonate for every 100 ml distilled water, and then dissolve the formed TNT with it by heating. The result will be the pure TNT after the dissolve, wash, boil, and cooling the hard substance.

Important Information:

It is supposed to have the amount from the previous percentages; 136 grams, but depends on the accuracy and care at work, and the process of separating the oily layer, which might be more. The TNT is hard to dissolve in water, does not affect the metals, and doesn't react with them. It dissolves with the sulfuric and nitric acids. It doesn't have the ability to absorb moisture. Its density is 1.6. Its importance is shown in the easiness to make without danger, its blasting power, and chemical stability, less shock sensitivity, fusion, and heat. This is what makes it safe to use.
The pure TNT has a yellowish white color, gets affected by light, and forms a brown or black layer.

(2) C4 Explosive Material
The explosive material C4 is composed of the following mixture:
91% of RDX
1.6 of metallic oil (car oil)
7.4% of nitrocellulose
****

C3 explosive Material is composed of the following mixture:
77% of RDX
23% of butylphosphine + nitrocellulose
Observation:
It is possible to be 3% Nitrocellulose + Dinitrotoluene
****

(4) Hexoline Explosive Material is composed of the following mixture:
50% RDX + 50% TNT
****

(5) TNT Explosive Material Tetryl is composed of the following mixture:
50% Tetryl + 50% TNT
****

(6) Plastic Explosive Material is composed of the following mixture:
71% RDX
6% Zinco oil (paint oil)
4% TNT
11% Dinitrotoluene
5% Toluene
3% Tetryl

Observation:
The color of the material is a brownish yellow and used as an essential charge. Its blasting velocity is 7.93 km/sec. It is 35% sensitive to impact. It is explosion temperature is 172^{o} Celsius.
Similar to C3 and doesn't react with metals, and is not affected by moisture. Its stability is good during storage.
****

Explosive Materials / Group of Mixtures

First; German Explosive

This explosive is composed of the following mixture:
50% Methylamine Nitrate + 35% Sodium Nitrate + 15% RDX
****

Second:
A mixture composed of the following:
80% of Potassium Chlorate $KCPO_3$
10% of Sugar
10% of Aluminum Powder
****

Third:
A mixture composed of the following:
90% of Potassium Chlorate $KCPO_3$
10% of Kerosene
****

Fourth:
A mixture composed of the following:
78% of Potassium Chlorate $KCPO_3$
12% of Potassium Nitrate KNO3
5% of Sulfate
4% of Charcoal
4% of Metallic Oil (car oil)
(TC: It is more than 100 %?)
****

Fifth:
A mixture composed of the following:
88% of Potassium Chlorate
12% of Magnesium Oxide
****

Sixth:
A mixture composed of the following:

88% of Potassium Chlorate
12% of Vaseline (hair lotion)
****

Seventh:
A mixture composed of the following:
40% of Ammonium Nitrate
60% of TNT
****

Eighth:
A mixture composed of the following:
60% of Barium Nitrate
40% of TNT
****

Ninth:
A mixture composed of the following:
80% of Ammonium Nitrate
15% of Aluminum Powder
5% of Charcoal
****

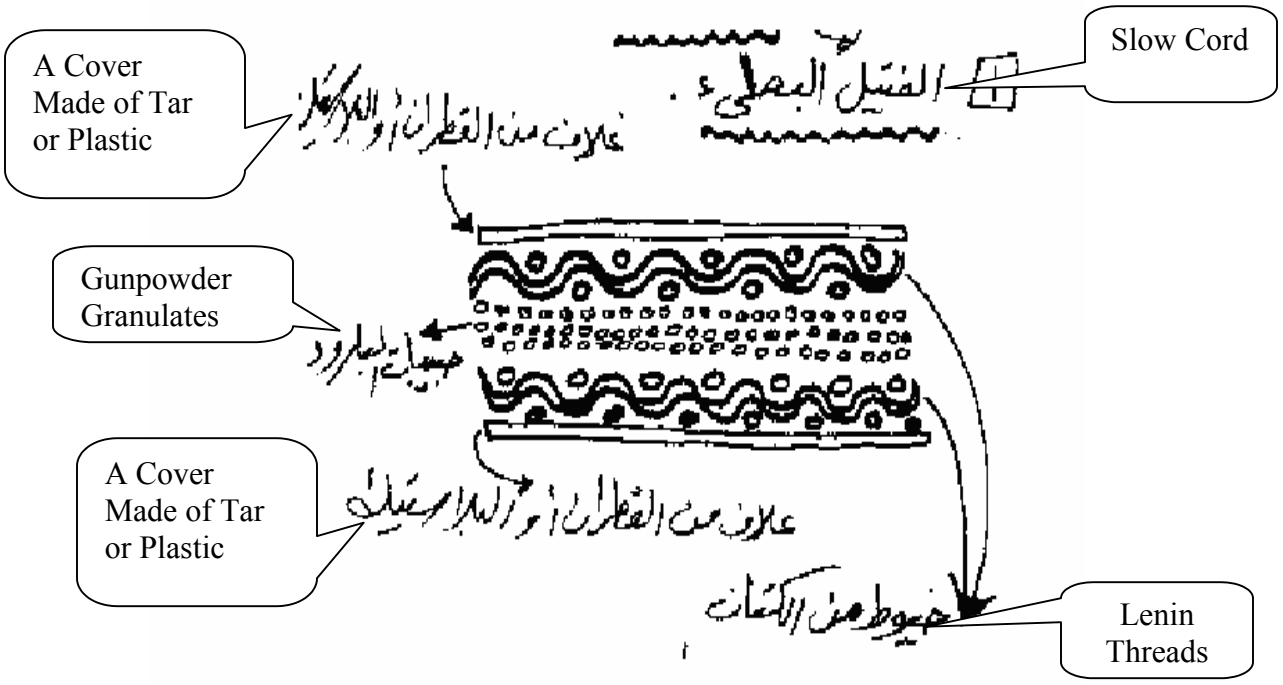
Tenth:
A mixture composed of the following:
88% of Ammonium Nitrate
12% of Sugar
****

Eleventh:
A mixture composed of the following:
77% of Ammonium Nitrate
3% of Wood Sawdust
12% of TNT
3% of Nitroglycerine
5% of Nitrocellulose
****

Twelfth:
A mixture composed of the following:
94% of Ammonium Nitrate
2% of Potassium Nitrate
4% of Charcoal
****
Thirteenth:
A mixture composed of the following:
91% of Ammonium Nitrate
4% of Potassium Nitrate
5% of Glue
****
Fourteenth:
A mixture composed of the following:
15% of Nitroglycerine
62% of Sodium Nitrate
21% of Sawdust
4% of Sodium Carbonates
****
Fifteenth:
A mixture composed of the following:
26% of Nitroglycerine
33% of Potassium Nitrate
41% of Sawdust
****
Sixteenth:
A mixture composed of the following:
47% of Nitroglycerine
50% of Sawdust
3% of Gunpowder Cotton
****

Seventeenth:
A mixture composed of the following:
88% of Nitroglycerine
5% of Potassium Nitrate
7% of Tetryl
****
Eighteenth:
A mixture composed of the following:
9.5% of Nitroglycerine
0.5 of Nitrocellulose
59% of Ammonium Nitrate
6% of Sawdust
10% of Ammonium Oxalates
15% of Sodium Chloride
****

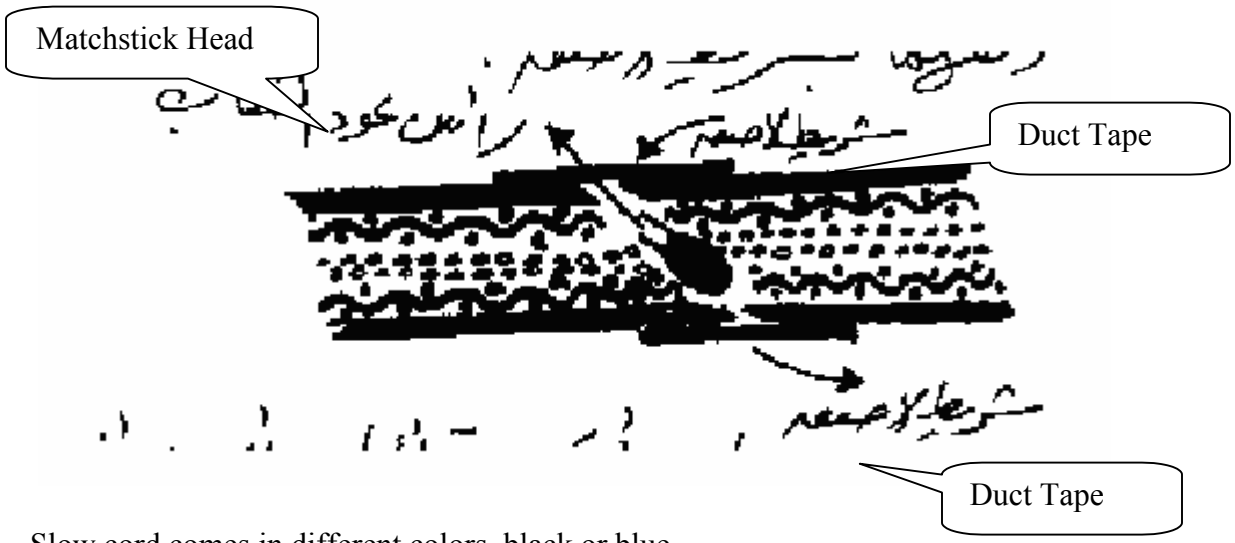
Cords
(1)- Slow Cord



Observations regarding the slow cord:

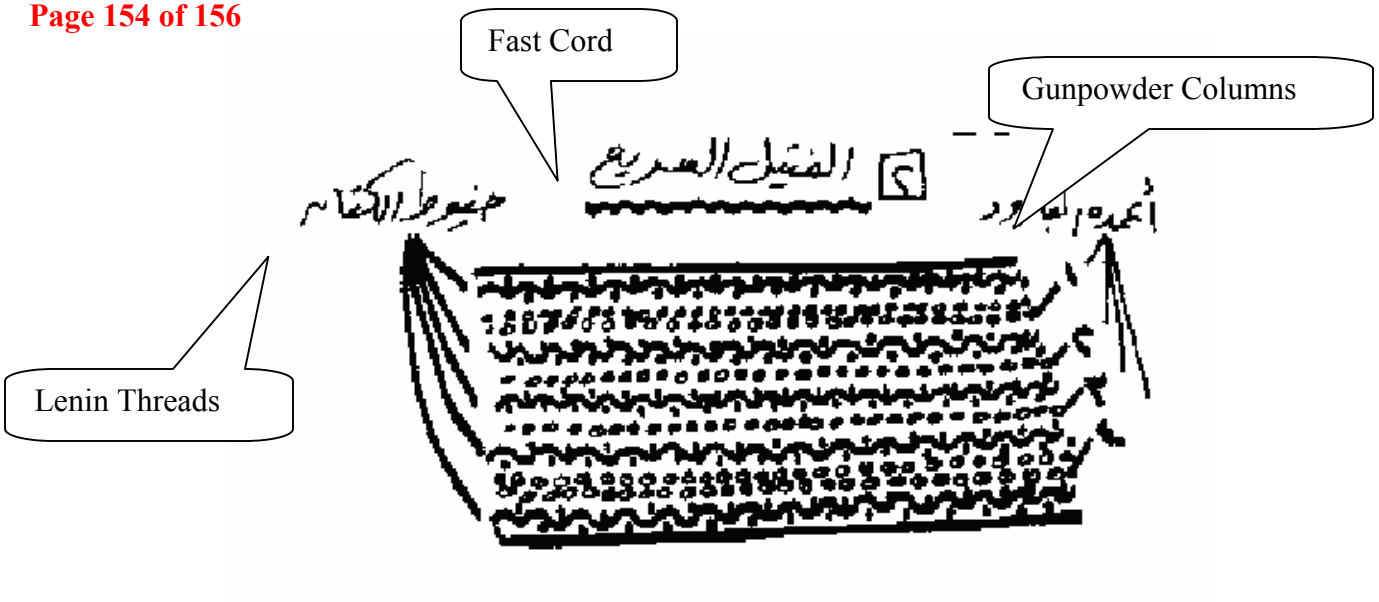
- Every kind of the slow cords ignites within a second with the consideration of the effect of moisture on the gunpowder.
- When we use the cord after storing it, we cut 15 cm of its ends.
- The cord should not be bended to avoid the separation of gunpowder granulates from each other.
- We cut the cord in a straight way and place it in the detonator, and we cut the other intended to ignite end in a 45^{o} shape.
- The cord is isolated during storage for example by a glue tape to avoid the moisture.
- We take a piece of the cord for testing (test the time of ignition).

Connecting a Slow Cord with another Slow Cord:
Both cords are cut in a 45^{o} shape. For more assurance, we place a matchstick head between them, and wrap them by a duct tape.



- Slow cord comes in different colors, black or blue.

Fast Cord:



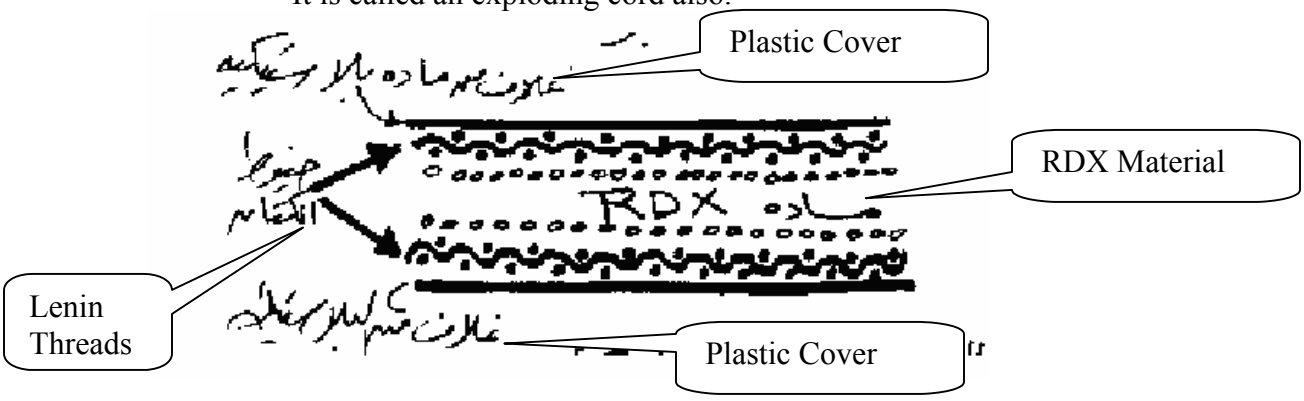
* 30cm of a fast cord ignites in one second.
Some 60cm cords ignite in one second.
Some 90cm cords ignite in one second.
It all depends on the kind, quality, and purity of gunpowder.

Observations:

- If we do a cross section cut to the cord, we will see four columns of gunpowder.
- Its outer cover has several colors and can be made of plastic or tar.
- It is used in booby traps.

Detonation Cord

- It is called an exploding cord also.

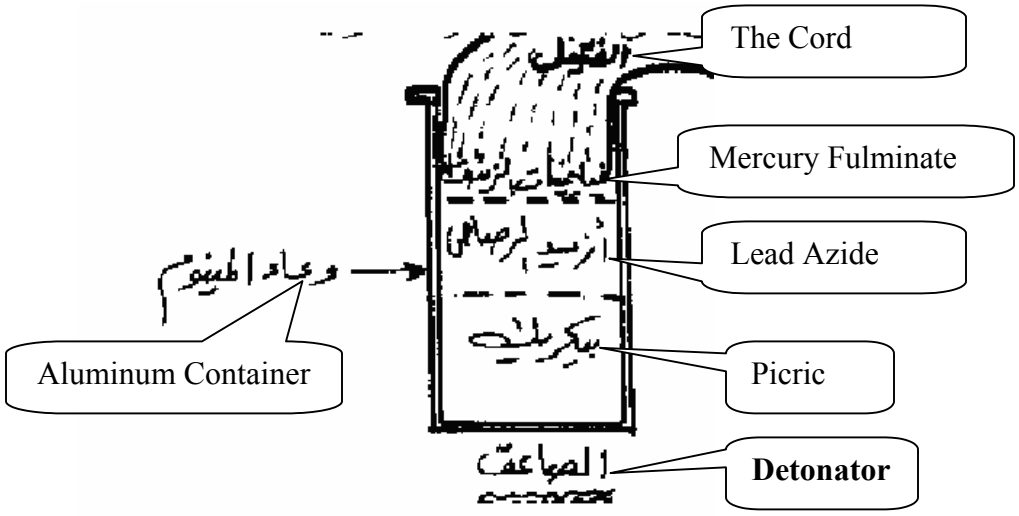


- The detonation cords ignites at a speed of 8 km/sec
- The cover has a plastic substance.
- The detonation cord explodes and doesn't burn.

- The explosion wave speed to the cord is 8 km/sec
- The detonation cord substitutes for the use of many detonators.
- We can detonate several charges at once by using it.
- It can't be used under water after ten hours.
- It can explode by using a tension force or impact equal to 15 km (TC: Wrong unit?)
- It is used for uprooting the tress in the civilian usages.
- It is prohibited to expose it to the sun for a long period of time.
- It is used in making explosive weapons.

Detonators

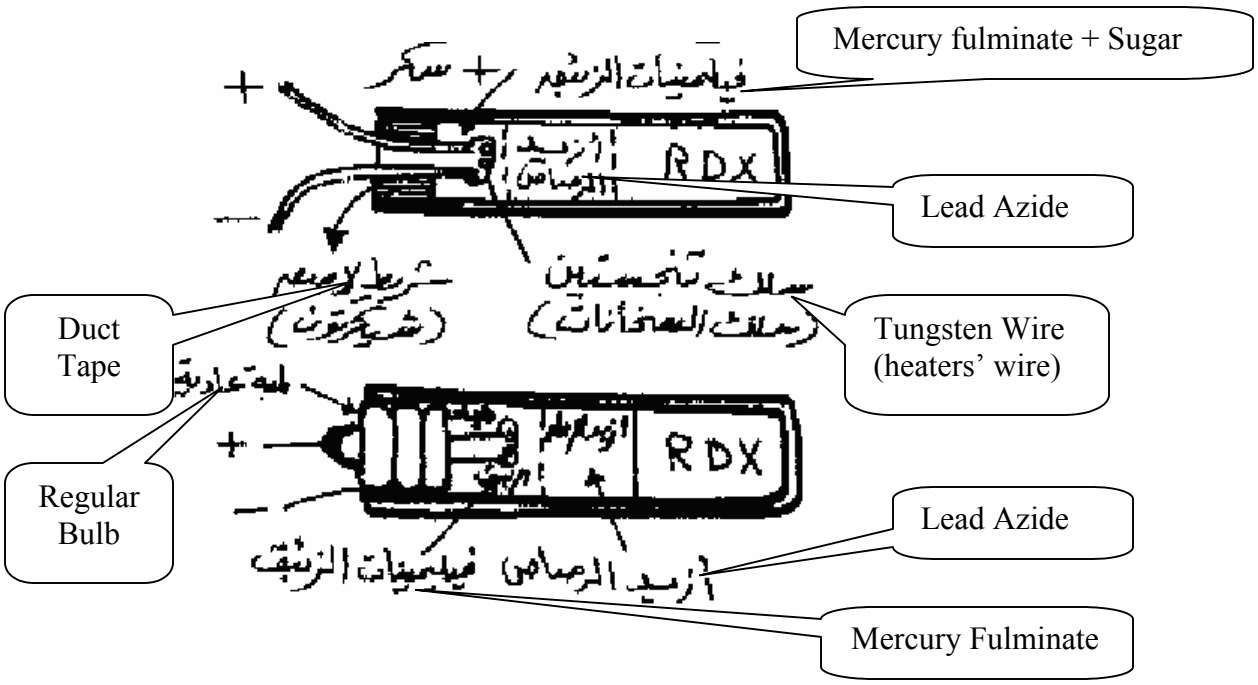
They are metal containers (aluminum or copper) that contain a highly sensitive inducing material. They are two kinds:
(1)- Regular detonator:
It is a regular metal tube, sealed from one end, and its length is 5 cm, and diameter is 7-mm. There are several other measurements. It contains an ignition charge (mercury or potassium fulminate + sugar or gunpowder cotton). It also contains a blasting charge of a highly sensitive inducing material (lead, silver, or copper azide); and a major charge of a highly effective explosive material like (RDX, Picric, or Tetryl). The detonator is considered damaged if it has any deformation in the shape. The regular detonator blasts by the slow or fast ignition cord.



The container is made of plastic, aluminum, or copper. The aluminum is usually used in most detonators, but it is a treated aluminum. The plastic container has an excellent advantage.

Observation: (copper azide is highly sensitive to heat and compress. It might explode on its own. Therefore, it is not used).
Another Observation:
When the lead azide is placed in copper detonators, it will spontaneously react with the copper metal, and will convert into a copper azide.

(2)- Electrical Detonator
Its components are the same as the regular detonator, except it has an electrical resistance made of a tungsten wire and two conductive wires that have the length of 2: 7 meters.
These detonators are used when there is an electrical source (a battery or something else).



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